SEQUENCE LISTING

<110> EXELIXIS, INC.

<120> SULFS AS MODIFIERS OF THE BETA CATENIN PATHWAY AND METHODS OF USE

<130> EX04-057C-PC

<150> US 60/495,172
<151> 2003-08-14

<160> 11

<170> PatentIn version 3.2

<210> 1
<211> 5699
<212> DNA
<213> Homo sapiens

<400> 1
ggagttctca gacctccagt ttcagccctg ccctcagcct ccaatccgta agagacaccc   60

agccccagca attggattgg gcagcccgtc ttgacacacc actgtgctga gtgcttgagg   120

acgtgtttca acagatggtt ggggttagtg tgtgtcatca cattcgagtg gggattaaga   180

gaaggaaggc tgccttgctg gagctgtgtg gtcttctcca agtgagagtc gcaggcaata   240

gaactacttt gcttttggag gaaaaggagg aattcatttt cagcagacac aagaaaagca   300

gtttttttttt cagggattct tcacttctct tgaacaagga actcactcag agactaacac   360

aaaggaagta atttcttacc tggtcattat ttagtctaca ataagttcat ccttcttcag   420

tgtgaccagt aaattcttcc catactcttg aagagagcat aattggaatg gagaggtggt   480

gctgacggcc acccaccatc atctaaagaa gataaacttg gcaaatgaca tgcaggttct   540

tcaaggcaga ataattgcag aaaatcttca aaggacccta tctgcagatg ttctgaatac   600

ctctgagaat agagattgat tattcaacca ggatacctaa ttcaagaact ccagaaatca   660

ggagacggag acattttgtc agttttgcaa cattggacca aatacaatga agtattcttg   720

ctgtgctctg gttttggctg tcctgggcac agaattgctg ggaagcctct gttcgactgt   780

cagatccccg aggttcagag gacggataca gcaggaacga aaaaacatcc gacccaacat   840

tattcttgtg cctaccgatg atcaagatgt ggagctgggg tccctgcaag tcatgaacaa   900

aacgagaaag attatggaac atggggggggc caccttcatc aatgcctttg tgactacacc   960

catgtgctgc ccgtcacggt cctccatgct caccgggaag tatgtgcaca atcacaatgt   1020

ctacaccaac aacgagaact gctcttcccc ctcgtggcag gccatgcatg agcctcggac   1080

```
ttttgctgta tatcttaaca acactggcta cagaacagcc ttttttggaa aataacctcaa    1140

tgaatataat ggcagctaca tccccccctgg gtggcgagaa tggcttggat taatcaagaa    1200

ttctcgcttc tataattaca ctgtttgtcg caatggcatc aaagaaaagc atggatttga    1260

ttatgcaaag gactacttca cagacttaat cactaacgag agcattaatt actgaaaat     1320

gtctaagaga atgtatcccc ataggcccgt tatgatggtg atcagccacg ctgcgcccca    1380

cggccccgag gactcagccc cacagttttc taaactgtac cccaatgctt cccaacacat    1440

aactcctagt tataactatg caccaaatat ggataaacac tggattatgc agtacacagg    1500

accaatgctg cccatccaca tggaatttac aaacattcta cagcgcaaaa ggctccagac    1560

tttgatgtca gtggatgatt ctgtggagag gctgtataac atgctcgtgg agacggggga    1620

gctggagaat acttacatca tttacaccgc cgaccatggt taccatattg ggcagtttgg    1680

actggtcaag gggaaatcca tgccatatga ctttgatatt cgtgtgcctt tttttattcg    1740

tggtccaagt gtagaaccag gatcaatagt cccacagatc gttctcaaca ttgacttggc    1800

ccccacgatc ctggatattg ctgggctcga cacacctcct gatgtggacg gcaagtctgt    1860

cctcaaactt ctggacccag aaaagccagg taacaggttt cgaacaaaca agaaggccaa    1920

aatttggcgt gatacattcc tagtggaaag aggcaaattt ctacgtaaga aggaagaatc    1980

cagcaagaat atccaacagt caaatcactt gcccaaatat gaacgggtca aagaactatg    2040

ccagcaggcc aggtaccaga cagcctgtga caaccggggg cagaagtggc aatgcattga    2100

ggatacatct ggcaagcttc gaattcacaa gtgtaaagga cccagtgacc tgctcacagt    2160

ccggcagagc acgcggaacc tctacgctcg cggcttccat gacaaagaca aagagtgcag    2220

ttgtagggag tctggttacc gtgccagcag aagccaaaga aagagtcaac ggcaattctt    2280

gagaaaccag gggactccaa agtacaagcc cagatttgtc catactcggc agacacgttc    2340

cttgtccgtc gaatttgaag gtgaaatata tgacataaat ctggaagaag aagaagaatt    2400

gcaagtgttg caaccaagaa acattgctaa gcgtcatgat gaaggccaca aggggccaag    2460

agatctccag gcttccagtg gtggcaacag gggcaggatg ctggcagata gcagcaacgc    2520

cgtgggccca cctaccactg tccgagtgac acacaagtgt tttattcttc ccaatgactc    2580

tatccattgt gagagagaac tgtaccaatc ggccagagcg tggaaggacc ataaggcata    2640

cattgacaaa gagattgaag ctctgcaaga taaaattaag aatttaagag aagtgagagg    2700

acatctgaag agaaggaagc ctgaggaatg tagctgcagt aaacaaagct attacaataa    2760

agagaaaggt gtaaaaaagc aagagaaatt aaagagccat cttcacccat tcaaggaggc    2820
```

```
tgctcaggaa gtagatagca aactgcaact tttcaaggag aacaaccgta ggaggaagaa      2880

ggagaggaag gagaagagac ggcagaggaa gggggaagag tgcagcctgc ctggcctcac      2940

ttgcttcacg catgacaaca accactggca gacagccccg ttctggaacc tgggatcttt      3000

ctgtgcttgc acgagttcta acaataacac ctactggtgt ttgcgtacag ttaatgagac      3060

gcataatttt cttttctgtg agtttgctac tggctttttg gagtattttg atatgaatac      3120

agatccttat cagctcacaa atacagtgca cacggtagaa cgaggcattt tgaatcagct      3180

acacgtacaa ctaatggagc tcagaagctg tcaaggatat aagcagtgca acccaagacc      3240

taagaatctt gatgttggaa ataaagatgg aggaagctat gacctacaca gaggacagtt      3300

atgggatgga tgggaaggtt aatcagcccc gtctcactgc agacatcaac tggcaaggcc      3360

tagaggagct acacagtgtg aatgaaaaca tctatgagta cagacaaaac tacagactta      3420

gtctggtgga ctggactaat tacttgaagg atttagatag agtatttgca ctgctgaaga      3480

gtcactatga gcaaaataaa acaaataaga ctcaaactgc tcaaagtgac gggttcttgg      3540

ttgtctctgc tgagcacgct gtgtcaatgg agatggcctc tgctgactca gatgaagacc      3600

caaggcataa ggttgggaaa acacctcatt tgaccttgcc agctgacctt caaaccctgc      3660

atttgaaccg accaacatta agtccagaga gtaaacttga atggaataac gacattccag      3720

aagttaatca tttgaattct gaacactgga gaaaaaccga aaaatggacg gggcatgaag      3780

agactaatca tctggaaacc gatttcagtg gcgatggcat gacagagcta gagctcgggc      3840

ccagccccag gctgcagccc attcgcaggc acccgaaaga acttccccag tatggtggtc      3900

ctggaaagga cattttgaa gatcaactat atcttcctgt gcattccgat ggaatttcag       3960

ttcatcagat gttcaccatg gccaccgcag aacaccgaag taattccagc atagcgggga      4020

agatgttgac caaggtggag aagaatcacg aaaaggagaa gtcacagcac ctagaaggca      4080

gcgcctcctc ttcactctcc tctgattaga tgaaactgtt accttaccct aaacacagta      4140

tttctttta acttttttat ttgtaaacta ataaaggtaa tcacagccac caacattcca       4200

agctaccctg ggtacctttg tgcagtagaa gctagtgagc atgtgagcaa gcggtgtgca      4260

cacggagact catcgttata atttactatc tgccaagagt agaaagaaag ctgggggata      4320

tttgggttgg cttggttttg attttttgct tgtttgtttg ttttgtacta aaacagtatt      4380

atcttttgaa tatcgtaggg acataagtat atacatgtta tccaatcaag atggctagaa      4440

tggtgccttt ctgagtgtct aaaacttgac acccctggta aatctttcaa cacacttcca      4500
```

```
ctgcctgcgt aatgaagttt tgattcattt ttaaccactg gaattttttca atgccgtcat    4560

tttcagttag atgattttgc actttgagat taaaatgcca tgtctatttg attagtctta    4620

tttttttatt tttacaggct tatcagtctc actgttggct gtcattgtga caaagtcaaa    4680

taaaccccca aggacgacac acagtatgga tcacatattg tttgacatta agctttttgcc   4740

agaaaatgtt gcatgtgttt tacctcgact tgctaaaatc gattagcaga aaggcatggc    4800

taataatgtt ggtggtgaaa ataaataaat aagtaaacaa aatgaagatt gcctgctctc    4860

tctgtgccta gcctcaaagc gttcatcata catcatacct ttaagattgc tatattttgg    4920

gttattttct tgacaggaga aaaagatcta aagatctttt attttcatct ttttttggttt    4980

tcttggcatg actaagaagc ttaaatgttg ataaaatatg actagttttg aatttacacc    5040

aagaacttct caataaaaga aaatcatgaa tgctccacaa tttcaacata ccacaagaga    5100

agttaatttc ttaacattgt gttctatgat tatttgtaag accttcacca agttctgata    5160

tcttttaaag acatagttca aaattgcttt tgaaaatctg tattcttgaa aatatccttg    5220

ttgtgtatta ggtttttaaa taccagctaa aggattacct cactgagtca tcagtaccct    5280

cctattcagc tccccaagat gatgtgtttt tgcttaccct aagagaggtt ttcttcttat    5340

ttttagataa ttcaagtgct tagataaatt atgttttctt taagtgttta tggtaaactc    5400

ttttaaagaa aatttaatat gttatagctg aatctttttg gtaactttaa atctttatca    5460

tagactctgt acatatgttc aaattagctg cttgcctgat gtgtgtatca tcggtgggat    5520

gacagaacaa acatatttat gatcatgaat aatgtgcttt gtaaaaagat ttcaagttat    5580

taggaagcat actctgtttt ttaatcatgt ataatattcc atgatacttt tatagaacaa    5640

ttctggcttc aggaaagtct agaagcaata tttcttcaaa taaaaggtgt ttaaactttt    5699
```

```
<210>   2
<211>   1013
<212>   DNA
<213>   Homo sapiens

<400>   2
ctcagaagct gtcaaggata taagcagtgc aacccaagac ctaagaatct tgatgttgga      60

aataaagatg gaggaagcta tgacctacac agaggacagt tatgggatgg atgggaaggt     120

taatcagccc cgtctcactg cagacatcaa ctggcaaggc ctagaggagc tacacagtgt     180

gaatgaaaac atctatgagt acagacaaaa ctacagactt agtctggtgg actggactaa     240

ttacttgaag gatttagata gagtatttgc actgctgaag agtcactatg agcaaaataa     300
```

aacaaataag actcaaactg ctcaaagtga cgggttcttg gttgtctctg ctgagcacgc   360

tgtgtcaatg gagatggcct ctgctgactc agatgaagac ccaaggcata aggttgggaa   420

aacacctcat ttgaccttgc cagctgacct tcaaaccctg catttgaacc gaccaacatt   480

aagtccagag agtaaacttg aatggaataa cgacattcca gaagttaatc atttgaattc   540

tgaacactgg agaaaaccg aaaaatggac ggggcatgaa gagactaatc atctggaaac   600

cgatttcagt ggcgatggca tgacagagct agagctcggg cccagcccca ggctgcagcc   660

cattcgcagg cacccgaaag aacttcccca gtatggtggt cctggaaagg acatttttga   720·

agatcaacta tatcttcctg tgcattccga tggaatttca gttcatcaga tgttcaccat   780

ggccaccgca gaacaccgaa gtaattccag catagcgggg aagatgttga ccaaggtgga   840

gaagaatcac gaaaaggaga agtcacagca cctagaaggc agcgcctcct cttcactctc   900

ctctgattag atgaaactgt taccttaccc taaacacagt atttcttttt aactttttta   960

tttgtaaact aataaaggta atcacagcca ccaacaaaaa aaaaaaaaa aaa   1013

<210> 3
<211> 4279
<212> DNA
<213> Homo sapiens

<400> 3
gggccatttc tggacaacag ctgctatttt cacttgagcc caagttaatt tctcggggag   60

ttctcgggcg cgcacaggca gctcggtttg ccctgcgatt gagctgcggg tcgcggccgg   120

cgccggcctc tccaatggca aatgtgtgtg gctggaggcg agcgcgaggc tttcggcaaa   180

ggcagtcgag tgtttgcaga ccggggcgag tcctgtgaaa gcagataaaa gaaaacattt   240

attaacgtgt cattacgagg ggagcgcccg gccggggctg tcgcactccc cgcggaacat   300

ttggctccct ccagctccta gagaggagaa gaagaaagcg gaaagaggc agattcacgt   360

cgtttccagc caagtggacc tgatcgatgg ccctcctgaa tttatcacga tatttgattt   420

attagcgatg ccccctggtt tgtgtgttac gcacacacac gtgcacacaa ggctctggct   480

·cgcttccctc cctcgtttcc agctcctggg cgaatcccac atctgtttca actctccgcc   540

gagggcgagc aggagcgaga gtgtgtcgaa tctgcgagtg aagagggacg agggaaaaga   600

aacaaagcca cagacgcaac ttgagactcc cgcatcccaa aagaagcacc agatcagcaa   660

aaaaagaaga tgggcccccc gagcctcgtg ctgtgcttgc tgtccgcaac tgtgttctcc   720

ctgctgggtg gaagctcggc cttcctgtcg caccaccgcc tgaaaggcag gtttcagagg   780

gaccgcagga acatccgccc caacatcatc ctggtgctga cggacgacca ggatgtggag   840

ctgggttcca tgcaggtgat gaacaagacc cggcgcatca tggagcaggg cggggcgcac   900

ttcatcaacg ccttcgtgac cacacccatg tgctgcccct cacgctcctc catcctcacc   960

ggcaagtacg tccacaacca caacacctac accaacaatg agaactgctc ctcgccctcc   1020

tggcaggcac agcacgagag ccgcaccttt gccgtgtacc tcaatagcac tggctaccgg   1080

acagctttct tcgggaagta tcttaatgaa tacaacggct cctacgtgcc acccggctgg   1140

aaggagtggg tcggactcct taaaaactcc cgctttttata actacacgct gtgtcggaac   1200

ggggtgaaag agaagcacgg ctccgactac tccaaggatt acctcacaga cctcatcacc   1260

aatgacagcg tgagcttctt ccgcacgtcc aagaagatgt acccgcacag gccagtcctc   1320

atggtcatca gccatgcagc ccccccacggc cctgaggatt cagccccaca atattcacgc   1380

ctcttcccaa acgcatctca gcacatcacg ccgagctaca actacgcgcc caacccggac   1440

aaacactgga tcatgcgcta cacggggccc atgaagccca tccacatgga attcaccaac   1500

atgctccagc ggaagcgctt gcagaccctc atgtcggtgg acgactccat ggagacgatt   1560

tacaacatgc tggttgagac gggcgagctg gacaacacgt acatcgtata caccgccgac   1620

cacggttacc acatcggcca gtttggcctg gtgaaaggga aatccatgcc atatgagttt   1680

gacatcaggg tcccgttcta cgtgaggggc cccaacgtgg aagccggctg tctgaatccc   1740

cacatcgtcc tcaacattga cctggccccc accatcctgg acattgcagg cctggacata   1800

cctgcggata tggacgggaa atccatcctc aagctgctgg acacggagcg gccggtgaat   1860

cggtttcact tgaaaaagaa gatgagggtc tggcgggact ccttcttggt ggagagaggc   1920

aagctgctac acaagagaga caatgacaag gtggacgccc aggaggagaa ctttctgccc   1980

aagtaccagc gtgtgaagga cctgtgtcag cgtgctgagt accagacggc gtgtgagcag   2040

ctgggacaga gtggcagtg tgtggaggac gccacgggga agctgaagct gcataagtgc   2100

aagggcccca tgcggctggg cggcagcaga gccctctcca acctcgtgcc caagtactac   2160

gggcagggca gcgaggcctg cacctgtgac agcggggact acaagctcag cctggccgga   2220

cgccggaaaa aactcttcaa gaagaagtac aaggccagct atgtccgcag tcgctccatc   2280

cgctcagtgg ccatcgaggt ggacggcagg gtgtaccacg taggcctggg tgatgccgcc   2340

cagccccgaa acctcaccaa gcggcactgg ccaggggccc ctgaggacca agatgacaag   2400

gatggtgggg acttcagtgg cactggaggc cttcccgact actcagccgc caaccccatt   2460

aaagtgacac atcggtgcta catcctagag aacgacacag tccagtgtga cctggacctg   2520

```
tacaagtccc tgcaggcctg gaaagaccac aagctgcaca tcgaccacga gattgaaacc   2580

ctgcagaaca aaattaagaa cctgagggaa gtccgaggtc acctgaagaa aaagcggcca   2640

gaagaatgtg actgtcacaa aatcagctac cacacccagc acaaaggccg cctcaagcac   2700

agaggctcca gtctgcatcc tttcaggaag ggcctgcaag agaaggacaa ggtgtggctg   2760

ttgcgggagc agaagcgcaa gaagaaactc cgcaagctgc tcaagcgcct gcagaacaac   2820

gacacgtgca gcatgccagg cctcacgtgc ttcacccacg acaaccagca ctggcagacg   2880

gcgcctttct ggacactggg gcctttctgt gcctgcacca gcgccaacaa taacacgtac   2940

tggtgcatga ggaccatcaa tgagactcac aatttcctct tctgtgaatt tgcaactggc   3000

ttcctagagt actttgatct caacacagac ccctaccagc tgatgaatgc agtgaacaca   3060

ctggacaggg atgtcctcaa ccagctacac gtacagctca tggagctgag gagctgcaag   3120

ggttacaagc agtgtaaccc ccggactcga aacatggacc tgggacttaa agatggagga   3180

agctatgagc aatacaggca gtttcagcgt cgaaagtggc cagaaatgaa gagaccttct   3240

tccaaatcac tgggacaact gtgggaaggc tgggaaggtt aagaaacaac agaggtggac   3300

ctccaaaaac atagaggcat cacctgactg cacaggcaat gaaaaaccat gtgggtgatt   3360

tccagcagac ctgtgctatt ggccaggagg cctgagaaag caagcacgca ctctcagtca   3420

acatgacaga ttctggagga taaccagcag gagcagagat aacttcagga agtccatttt   3480

tgcccctgct tttgctttgg attatacctc accagctgca caaaatgcat tttttcgtat   3540

caaaaagtca ccactaaccc tcccccagaa gctcacaaag gaaaacggag agagcgagcg   3600

agagagattt ccttggaaat ttctcccaag ggcgaaagtc attggaattt ttaaatcata   3660

ggggaaaagc agtcctgttc taaatcctct tattcttttg gtttgtcaca aagaaggaac   3720

taagaagcag gacagaggca acgtggagag gctgaaaaca gtgcagagac gtttgacaat   3780

gagtcagtag cacaaaagag atgacattta cctagcatat aaaccctggt tgcctctgaa   3840

gaaactgcct tcattgtata tatgtgacta tttacatgta atcaacatgg gaactttag   3900

gggaacctaa taagaaatcc caattttcag gagtggtggt gtcaataaac gctctgtggc   3960

cagtgtaaaa gaaaaaaaaa aaaaattgtg gacatttctg ttcctgtcca gataccattt   4020

ctcctagtat ttctttgtta tgtcccagaa ctgatgtttt tttttaagg tactgaaaag   4080

aaatgaagtt gatgtatgtc ccaagttttg atgaaactgt atttgtaaaa aaaattttgt   4140

agtttaagta ttgtcataca gtgttcaaaa ccccagccaa tgaccagcag ttggtatgaa   4200
```

7

```
gaacctttga cattttgtaa aaggccattt cttggggaaa aaaaaaaaaa aaaaaaaaaa    4260

aaaaaaaaaa aaaaaaaaa                                                  4279


<210>   4
<211>   4915
<212>   DNA
<213>   Homo sapiens

<400>   4
cacttgagcc gaagttaatt tctcggggag ttctcgggcg cgcacaggca gctcggtttg      60

ccctgcgatt gagctgcggg tcgcggccgg cgccggcctc tccaatggca aatgtgtgtg     120

gctggaggcg agcgcgaggc tttcggcaaa ggcagtcgag tgtttgcaga ccggggcgag     180

tcctgtgaaa gcagataaaa gaaaacattt attaacgtgt cattacgagg ggagcgcccg     240

gccggggctg tcgcactccc cgcggaacat ttggctccct ccagctccga gagaggagaa     300

gaagaaagcg gaaaagaggc agattcacgt cgtttccagc caagtggacc tgatcgatgg     360

ccctcctgaa tttatcacga tatttgattt attagcgatg ccccctggtt tgtgtgttac     420

gcacacacac gtgcacacaa ggctctggct cgcttccctc cctcgtttcc agctcctggg     480

cgaatcccac atctgtttca actctccgcc gagggcgagc aggagcgaga gtgtgtcgag     540

tgagtgtgcg tctgtgtgtc ccggcgaggg tgcgcgctcg gcgccgggag cgcggccagc     600

cgagtccgga ggcatcggga ggtcgagagc cgccgggacc ccagctctgc gttcactgcc     660

ccgtccggag ctggacttcg gggccggggc cggggccgtg cgccggggac aggcagggcc     720

gggtcgcggg ccgcgcgtcc cccaggccgg agatctgcga gtgaagaggg acgagggaaa     780

agaaacaaag ccacagacgc aacttgagac tcccgcatcc caaaagaagc accagatcag     840

caaaaaaaga agatgggccc cccgagcctc gtgctgtgct tgctgtccgc aactgtgttc     900

tccctgctgg gtggaagctc ggccttcctg tcgcaccacc gcctgaaagg caggtttcag     960

agggaccgca ggaacatccg ccccaacatc atcctggtgc tgacggacga ccaggatgtg    1020

gagctgggtt ccatgcaggt gatgaacaag acccggcgca tcatggagca gggcggggcg    1080

cacttcatca cgccttcgt gaccacaccc atgtgctgcc cctcacgctc ctccatcctc    1140

actggcaagt acgtccacaa ccacaacacc tacaccaaca atgagaactg ctcctcgccc    1200

tcctggcagg cacagcacga gagccgcacc tttgccgtgt acctcaatag cactggctac    1260

cggacagctt tcttcgggaa gtatcttaat gaatacaacg gctcctacgt gccacccggc    1320

tggaaggagt gggtcggact ccttaaaaac tcccgctttt ataactacac gctgtgtcgg    1380
```

```
aacggggtga aagagaagca cggctccgac tactccaagg attacctcac agacctcatc   1440

accaatgaca gcgtgagctt cttccgcacg tccaagaaga tgtacccgca caggccagtc   1500

ctcatggtca tcagccatgc agcccccac ggccctgagg attcagcccc acaatattca   1560

cgcctcttcc caaacgcatc tcagcacatc acgccgagct acaactacgc gcccaacccg   1620

gacaaacact ggatcatgcg ctacacgggg cccatgaagc ccatccacat ggaattcacc   1680

aacatgctcc agcggaagcg cttgcagacc ctcatgtcgg tggacgactc catggagacg   1740

atttacaaca tgctggttga cgggcgag ctggacaaca cgtacatcgt atacaccgcc   1800

gaccacggtt accacatcgg ccagtttggc ctggtgaaag ggaaatccat gccatatgag   1860

tttgacatca gggtcccgtt ctacgtgagg ggccccaacg tggaagccgg ctgtctgaat   1920

ccccacatcg tcctcaacat tgacctggcc cccaccatcc tggacattgc aggcctggac   1980

atacctgcgg atatggacgg gaaatccatc ctcaagctgc tggacacgga gcggccggtg   2040

aatcggtttc acttgaaaaa gaagatgagg gtctggcggg actccttctt ggtggagaga   2100

ggcaagctgc tacacaagag agacaatgac aaggtggacg cccaggagga gaactttctg   2160

cccaagtacc agcgtgtgaa ggacctgtgt cagcgtgctg agtaccagac ggcgtgtgag   2220

cagctgggac agaagtggca gtgtgtggag gacgccacgg ggaagctgaa gctgcataag   2280

tgcaagggcc ccatgcggct gggcggcagc agagccctct ccaacctcgt gcccaagtac   2340

tacgggcagg gcagcgaggc ctgcacctgt gacagcgggg actacaagct cagcctggcc   2400

ggacgccgga aaaaactctt caagaagaag tacaaggcca gctatgtccg cagtcgctcc   2460

atccgctcag tggccatcga ggtggacggc agggtgtacc acgtaggcct gggtgatgcc   2520

gcccagcccc gaaacctcac caagcggcac tggccagggg cccctgagga ccaagatgac   2580

aaggatggtg gggacttcag tggcactgga ggccttcccg actactcagc cgccaacccc   2640

attaaagtga cacatcggtg ctacatccta gagaacgaca cagtccagtg tgacctggac   2700

ctgtacaagt ccctgcaggc ctggaaagac cacaagctgc acatcgacca cgagattgaa   2760

accctgcaga acaaaattaa gaacctgagg gaagtccgag gtcacctgaa gaaaaagcgg   2820

ccagaagaat gtgactgtca caaatcagc taccacaccc agcacaaagg ccgcctcaag   2880

cacagaggct ccagtctgca tccttttcagg aagggcctgc aagagaagga caaggtgtgg   2940

ctgttgcggg agcagaagcg caagaagaaa ctccgcaagc tgctcaagcg cctgcagaac   3000

aacgacacgt gcagcatgcc aggcctcacg tgcttcaccc acgacaacca gcactggcag   3060

acggcgcctt tctggacact ggggcctttc tgtgcctgca ccagcgccaa caataacacg   3120
```

9

```
tactggtgca tgaggaccat caatgagact cacaatttcc tcttctgtga atttgcaact    3180

ggcttcctag agtactttga tctcaacaca gacccctacc agctgatgaa tgcagtgaac    3240

acactggaca gggatgtcct caaccagcta cacgtacagc tcatggagct gaggagctgc    3300

aagggttaca agcagtgtaa ccccggact cgaaacatgg acctgggact aaagatgga     3360

ggaagctatg agcaatacag gcagtttcag cgtcgaaagt ggccagaaat gaagagacct    3420

tcttccaaat cactgggaca actgtgggaa ggctgggaag gttaagaaac aacagaggtg    3480

gacctccaaa aacatagagg catcacctga ctgcacaggc aatgaaaaac catgtgggtg    3540

atttccagca gacctgtggt attggccagg aggcctgaga aagcaagcac gcactctcag    3600

tcaacatgac agattctgga ggataaccag caggagcaga gataacttca ggaagtccat    3660

ttttgcccct gcttttgctt tggattatac ctcaccagct gcacaaaatg catttttcg     3720

tatcaaaaag tcaccactaa ccctccccca gaagctcaca aaggaaaacg gagagagcga    3780

gcgagagaga tttccttgga aatttctccc aagggcgaaa gtcattggaa tttttaaatc    3840

atagggaaa agcagtcctg ttctaaatcc tcttattctt ttggtttgtc acaaagaagg     3900

aactaagaag caggacagag gcaacgtgga gaggctgaaa acagtgcaga gacgtttgac    3960

aatgagtcag tagcacaaaa gagatgacat ttacctagca ctataaaccc tggttgcctc    4020

tgaagaaact gccttcattg tatatatgtg actatttaca tgtaatcaac atgggaactt    4080

ttaggggaac ctaataagaa atcccaattt tcaggagtgg tggtgtcaat aaacgctctg    4140

tggccagtgt aaaagaaaat ccctcgcagt tgtggacatt tctgttcctg tccagatacc    4200

atttctccta gtatttcttt gttatgtccc agaactgatg tttttttttt aaggtactga    4260

aaagaaatga agttgatgta tgtcccaagt tttgatgaaa ctgtatttgt aaaaaaaatt    4320

ttgtagttta agtattgtca tacagtgttc aaaaccccag ccaatgacca gcagttggta    4380

tgaagaacct ttgacatttt gtaaaaggcc atttcttggg agttttttgg tgtgtctgtt    4440

tttttaaagt attcaagata ctaccagtca acatcttttt ggaagaaaat gccttgggtt    4500

tagaagattt tcttaaaagg ggagtagatg gttgtagatt gactaaaaag tctaccatac    4560

ttcaagggac tacaggtaag tctcatagta taccagcttt ggtacttcat tttttaaaaa    4620

agtattaatc aattgcaaag aaattcgcct tggccaaccc ttctttgtgt atcaggtagt    4680

ctaacctgat acaagtagtt gacagatttc aactatcaat caccagtcca acccatttct    4740

catttaacag atgacggaga taatccctaa aagcacccac atttgtttca atgccccaaa    4800
```

```
caggccaagg ctccctagca actccctagt ggcgtttttt aacttctcag aaactgttac    4860

cattatttga aataggcttc cttaacctcc tttacccctta acccaacagg gattt        4915


<210>   5
<211>   86453
<212>   DNA
<213>   Homo sapiens

<400>   5
gatcctagca ctttggggat tggaggtggg aggatcactt gaggccagga gttggagacc      60

agcctaaaca acacagtaac acccccagtt ctacaaaaca cacaaaaaat tagctagcaa     120

ggtggtgtgc gcttgtagtc ctagctgctt gggaggctga ggtgggagat tgcttgatct     180

caggagtttg aagctgcagt gagctatgac tgcaccacta cacttcagca tgggcaacag     240

tatgaaacct tgtctctaga aaataagtaa ataaataaat aattaaaaag gaaagacatg     300

gccggatgcg gtggcgcatg cctgtaatcc cagcactttg ggaggccaag gtgggtggat     360

cacctgaggt taggagtttg agaccagcct ggccaatgtg gtgaagctcc gtctctacta     420

aaaatacaaa aattagccgg gcatagtggc gtgtgcctgt aatcccagct actcgaaaag     480

ctgaggcagg aaaatcactt gaaccttgga ggtggaggtt gtagtgagct gagatcatgc     540

tacagcactc cagcctgggc aacagagtga gacttcatct caaaaaaaaa aaaaaaagtc     600

ataaggaaga gaaaatatac atattattca ttaagtggat catcataaag gtcttcattc     660

ttttcgtgag gttgagtagg cttgaggagg agaaagaaga ggaaatgttg gtcctactgt     720

cttaggcatg gcagaaatag agaaaaatct gcgtataaca gaacaaatgc agttcaaatg     780

tgttgtacaa ggggttatgg tattcgtata tatgtatata catacaaata caaacataat     840

tttgggggaa gagaagaaat tcccccctcct tatgtgtgaa tattttaatg gcatttagtc     900

aaacatctga attagcctaa cttacatttg ctgtttcacc ttgtgaagac aaatttcccc     960

agattgcttg tgctggcaaa taacatttca tctaacccct ttcttaactt tttttttttt    1020

ttttttttt tttgagacag actccctctg tcacccaggc tggagtgcag tggtgtgatc    1080

tcggcttact gcagcttctg cctcctggat tcaagcaatt ctcatgcctc agcctcccaa    1140

gtagctggga ttacaggcgt gcacggccac atccggctaa gttttgtatt tttggtagag    1200

atgggatttc accatgttgg ccaggctgaa actcctggcc tcaagtgacg tgcctgcctt    1260

ggcctaaagt gctgggatta taggcgtgag ccactacgcc tggccccttt tcttaacttt    1320

taatattaca tcagaatagg aaaaatgaga atagaaaaag ctgtctagtt gccgagaaaa    1380
```

```
caatcatgct ttgcttagct aaatttcttt tggtaatccc atcattctct tggttagcta   1440

ggtttgaaat ctgagttgtc tttgaatccc accgtactct gattcatttg gtaagcaggc   1500

tttatctggc tttctatttt catgtgtcct gtatttgttc cactttctgt tcctaatttt   1560

agcttccgag gccaagaccc cataatttca tgagggtgtt tttccttgtc tctactgctt   1620

ccttgtccac tcacttaaaa tttagctaga ttttcctaaa tgtatacttt tagccaagct   1680

tatgttgtgc tctaagtttt gtgctacctt tccttggctt acagaaagaa aaagtacaaa   1740

ctcccttctc tgacatttca aatggtactt tatctgagaa tctatccaag ttaccagcct   1800

taggtcttgc aatttccctg taaaatccct cagttaattg tgatatatac ccattcttct   1860

gaacatggca gagaactatc tccacaggtt tttttttttt tttttttgaga cagagtttgt   1920

tacccagctt ggagtgcaat ggcgcgatct tgtttcactg caacctccac ttccagggtc   1980

aagtgattct cctgcctcag cctcctgagt agctgggatt acaggcacgc gccaccctgc   2040

ccggctaatt ttgtattttt agtagagacg gggtttcacc atgttggcca ggctggtctt   2100

gaactcctga ccttaggtga tctacctgcc tcggcctccc aaagtgctgg ggttacaggt   2160

gtgaaccact gtgctcggcc aatttttttct tttttaaata cctttattt ggaagtatac   2220

atttacaaaa gttacaaaaa tatagtataa agaacatctg gatatccgtt atccagactt   2280

acccacttgc ttatttgtat ttgtgctgtc ctactctctt ttctcttttt ctacccacgt   2340

aaacacacac acaatttttt tttttaacca tttgagggtg agttacatat gttatgcttc   2400

tttccctaa tacttctgtt gtattcctac agatagggtc attctcttat ataaccatgg   2460

tacagttaat aacttcataa atggacatcg atgaaatcta tcgcccatat tccagttttg   2520

tcagttgacc taagaaagtc tcttgtagca ttttctatgc ttcctgtata gactacagtc   2580

tggggtcagg ttctgcattc agttattatt tctctttggc ctcctttttc ctgggatatt   2640

ttcacagcct gtctttatct cttatgacat tggcattttt gagaacacaa cccttcccta   2700

accccctttac tctgttcagt ggagatgttc ttcattttat gttggtctga aatttccttg   2760

tgattagatt aagatgttat ggattcttgg caggaatact gcatccgcaa tgtgatactc   2820

tgagatggag tcatatgacg tccgtctgtc ccttattgtg atgcaaattt tgatcccttg   2880

gccaaggtgt tgccagattt ctccaccatt tggttttttt gccctctctt ttgccaagca   2940

ataagcagct tgtgggaaa caatgcagat attctgattc ttttcacggt ttcttctaga   3000

tttagcatcc attgactctt gtctgatcca gctttttatt gtgatgattg caaaatggtc   3060

atttttttct ttccagcatt cctttcccat tacccgtcgg atcttggctg tattccataa   3120
```

```
tcaatagccc tatgtattgg tgatggattc atgaattcct attttttgaa tggtttacaa   3180

ttcacttacc ctgcttaatt attttagtgc tcaaattgtc ctagaagttt ggctagtgaa   3240

actcctgtaa gtgggccgct gtgtccttgt ggggaataaa agttttagag accaagatct   3300

ctctgagtgc taggtgtcct cactacttct gggctgtttt ctcatcttgg cctttttagt   3360

ggatagagct aggaaataat atgcatgctt atacacatac atgtacatat acatactcat   3420

acagtcatcc cttcgtacct gagggtgatt gggtctaaga ccctttgtgt gcaccaaaat   3480

ctgctgatgc ttaagttctt taaactataa agtagcaatt gtatttgcat ataacccatg   3540

ttcaatttct tgtatgcttt aagtcatctc tagattactt ataagaatct aacacagtgt   3600

aaatactgtg taggttgttg ttaaactgta ttttttaatt tgtattttat tgctgtattg   3660

ttttttttaaa tttattttttt gagtattttt gatccatgga tgcagaatcc acgatacaga   3720

gggccgactt cgcatgtgtt cattgaaaca tacatataca tattttagaa atcatgagct   3780

tatatcagta tgtacgtctt tattccatgt ctacagggtt ctttgtactt catttttttat   3840

ttttatgtcc cttattatta tgtgggaatc ctgactctca accttagtac atttactcat   3900

ttgcctaatc ctctaataca tctaaaataa tttcagaatt ggttttttca tttcactgca   3960

ataaacaaac tgaaaatgag tggagcattt gtctataatt cttctccacc tcccaatttt   4020

acccaagacc gagagtaaac agttaaaatt taaattgctt ggattagccc tccataccct   4080

ttctccacccc cactttttttt tttttttttt tttttttttt gaggcagtct tggttgctca   4140

ggctggagtg cagtggtgcg accttggctc actgcaacct ctgccttctg ggttcatggg   4200

attcttctgc ctcagcctcc tgagtagctg caactacagg tgcgtgccac catgcccagc   4260

taattttttgt atctttaata gagacagggt ctcaccacgt tgcccaagct ggtctccaac   4320

tcctgaggtc aggcgatccg cccgcctctg cctcccaagg tgctgggatt acaggagtga   4380

gccaccacgc ccgacctcca ccccactttt acttcccacc ttactttctg tataaactag   4440

ttagggtatt catttgaaac aaaattaagt ttatttactt gtttgcttat gctgcctccc   4500

attctgattt ttattttttgt aatatgtaga ataataacat gctttcaaaa gtcaaaatta   4560

tacaaaaggc atacattgct tttgtatccc ttccatgcca ttttttcttca gttttcttag   4620

gtaaccaact taaatgtttt ctgtcttatc cttcccattt cttttttttg atggtatctg   4680

tatgttttat ttatttattt atacaaaaga tagcgtacta tatatactct tgcactttgc   4740

ttttttttcct acttaactga tatctcctgg aaataatgcc ctatcatgcc aaagagatct   4800
```

13

```
ttcccattca tttattttaa ttgtagtaaa atttacagaa tataaaatac aacttttttt   4860

tcttttaaag actgaatttg gctcttgtct ctcaggctgg agtacagtgg tgcaatctca   4920

gctcactgca acctctgcct cccaggttca agagattctc ctgcctcagc ctcccaagta   4980

tctgggacta caaatgccca acagcatgcc cgtctaattt ttgtattttt ttttagtaga   5040

gacaggtttt caccatgttg accaggctgg tttcaaactc ctgacctcag gtgatccacc   5100

cgcctcagct tcccaaagtg cttgggagta agctacaggt gtaagccatt gtgcccggcc   5160

agaggaccaa cttttgatta aattatagat atccagttcc agggctattt gtagaaaaga   5220

tgttcctttt ttcttggttt gctttggtaa cttgattaat tgattatatt tgccaaagtc   5280

tctttctggc ctctattcag tgccatcctc atgcccatat acattgtctg attataggac   5340

tttatttatt tttttgagat agagtctcgc tctgtcactc aggctgacgt gcagtggcgc   5400

accctcagct cactgcaacc tctgcctccc tggttcaagt gattctcctg ccccagcctc   5460

ctgagtagct gggattacag gtgcccacta ctaagcccag ctaatttttt ttttttaagt   5520

agtgacgggg ttttgccatg ttgtccaggt tgatctcgag ctcctgactc aggtgataca   5580

ccctccttga cctcccaaag ttctgggatt ataggcatga gccactgcac ctggctgact   5640

tgaactttta aagtctcttt tatttgttct tttatcctga aactaggaaa caaatacaat   5700

accctctcca ccagatttca cttggaatac ttataaattt ggatgaagtc atctcttgtt   5760

caggttccct aaatttactg agtcattggc tgccactaag tgaccttcca tctgtgaagc   5820

tagtccctgt aaaccaagaa caggtaccag gcccataaac attgacttct tgtataatgt   5880

aaaatctttg ttttcttttt aaaaaaattt tttaatttat aagatgttta tttaaaatgt   5940

tttgtggaag tgaggtatca ctatattgcc taggctagtc ttgaactcct gggctcaaat   6000

aatccccctg cattggtttc cccaagtgtt ggtgctggga ttacaggtgt gagccactgt   6060

gtcctgccct actatctttg ttatagtggt ggacttgtca tacgattata ttataattat   6120

atgacattat atcattatat tgttcttaat tataagaaat agtatatgac ctagattgta   6180

caatgatttg tccagttatc ctggtaaatt ttatttacct ttgtcttgac ggaatttgat   6240

taagcctatg caaataacgt tattaacatg aaaaaataga cttagttttt actttatttt   6300

gaggtggggt ctcactctct tgacctacct ggagtgcagt ggtatgattg tggctcattg   6360

caatcttgaa ttcctggact caagcagtcc tgcctcagcc tcctgagtag ctgggactac   6420

aggcatgcgc caccgctctc aaatgccatt taaaaatttt cctacaaaag cataatatat   6480

taaattgtga gctagaggta gatgaagaag aaaggaaaag ggcttcctca tatagccatc   6540
```

14

```
agaaaacaga atattaaaaa ataacaccag cctgggcaat atggtaagac cccgtctcta   6600

caaaaataaa aaataaaaac attaactggg cattgtgtgt cacatgcctg tggtcccagc   6660

tgctggggag gctgaggtag gaggatcgct tgacgctggg aggctgatgc ctcagtgagc   6720

cgtgatcgca ccatcgcacc ccatcctggg caagagacca agaccctgcc tcaaaacaaa   6780

acaaaaaacg gctgggcatg gtggctcata cctgtagtcc cagcactttg ggaggctgag   6840

gcaggttgat cacctgaggt caggagttca agaccagcct gaccaacgtg gtgaaacctc   6900

tctctactaa aaacgtaaaa attagctggg ggtggtgatg ggtgcctgta atcccagcta   6960

ctcgggaggc tgaggcataa gaatcacttg aaccccaggg ggcagaggct gcagtgagcc   7020

gagatcgcac cattgcattc cagcctggga aacagagtaa gattgtgtct caagacaaaa   7080

aacaaagac aaaagaaaaa acaaagaaa aaaccatagt ctgaaacaac tggttaaatt   7140

tctgccacta gttcatttag tcctatgcag ttaattctgt ttctcttagg cttattctgt   7200

agtcactttt aagttgtctg cttagatgtt taagatacct agacattttg gcctttagta   7260

tagttttaaa atttaaaaat gttagctcag tagttcattg cccagagtat ttcataaatt   7320

atcaagattt aaaggtactt tgtacagtct tttgcatgag aatcttcaac tgtcctttga   7380

agacaaatta tagcatatga gtcctcaagg gaagcatcgg agagtagcag aagccatcac   7440

ccatttgaca gtaagacatt tctggtactc ttcattcatc tttatagatg tgcattttca   7500

tctgatgccc ctttctcttt ggcctgaagg atataatttc atttccagaa ttgtttatca   7560

ctgattgtct caacttttat ttatctgaaa atgtctttat ttcaccctat ttttgaaggt   7620

ttggttcact ggatagaaaa ttctgggttg ttgattttt tatttcagca ctttaaagtt   7680

gttctgtggt gttgtaacct cctccccttt ttttttttga agagttgatt tttaatcttg   7740

ttctcagtat gtgtggtctt tttttcttgt ggatactttt aagattttct ttttacgttt   7800

ggtttaaaat agtttgacta tgtatttagg tctagttttc tttgtattta tcctgcatgg   7860

tattctttga gcttcttgga tttgtaaatt tgtgttttca tcaaatatgg aaagttttgg   7920

ccattcttca agtacttttt ctgcatctct gcttcaattt aattctcctt cctctgggac   7980

tccaatcata cttgctaggc catttgattt tcttttgttt tgaggtggag tttcgttctt   8040

gtaccccagg ctggagtgca gtggtgctct tttggctcac tgcaacctcc gcctcctggg   8100

ttcaagcaat tctcctgcct cagctcctga gtagctggga ttacaggtgc ttgccaccac   8160

acctggctaa ttttttttgt attttttagta gagatggggt tttgccatgt tggccaggct   8220
```

```
ggtcttgaac tcctgacctc aggtgatcca tctgccccag cctcccaaag tgctgggatt    8280

acaggtgtga gccaccaggc ccagccgacc atttgatatg tttataagtc attaaggttc    8340

taaccatttt tcttcagtct tcttcctttc tcttcttcaa attggataat tcttttgata    8400

tcccttcaag ttcagtgact ttttctgcca actcaatttc taagcactat tcaacaatga    8460

aatactttta cctcttattt cattcctaca gccctgtgtt ggggttgata gaggcttcag    8520

aaaaggtaac aggtttatca aagttatata cctagtttgt ggcagaactg aaattagaac    8580

ctaacttgat tgtttacaaa ctacagacca ttttctttcc ataatgccat gatctttatc    8640

ttctaataag ttgctgtcag ttaaaatgtt catactgtaa ctggtgtgag tggtggtcct    8700

ggtagcggat gctacttaat taacaacatt gtcaaattgc agaaaattga agttcttctc    8760

atttaaaaaa cggttttcag ttgaagaatt taagtatcct gaagtcagta ataccttgaa    8820

ctaatctttt tagatgacat tcctccagca gtgaaagtat gtctgtggtt actcaacaga    8880

aaaatttaat tctaatgaca gactgttttt ttgagacaga gttttgctct tgttgcccag    8940

gctggagtgc agtagtgtga tctcctctca ctacaatctc tgcctcccag gttcaagcga    9000

ttttcctgcc tcagcctctc aagtagctcg ggttacaggc atccgccacc acaccctgct    9060

aatgttttgt attttgtaga gatggagttt caccatgttg gccaggctgg tcttgacctc    9120

ctgacctcag gtgatccacc tgcctcggcc tcccaaagtg ctgggactac aggcctgagc    9180

cactgcaccc ggccaccaca tacgttttaa aatcaagact ttggaatccc agactgcggt    9240

atcattcatt gtctcggaaa ttaactcttt ggagtacctc ctcttgagtt gatggatttt    9300

tttttttttt tttttttttt ttttgagaca gtctcgctct gttgcccagg ctggagtgca    9360

gtggtgcgtc gcggctcact gcaagctcca cctcccgggt tcactccatt ctcctgcctc    9420

agcctccgga gtagctgcga ctacaggcgc ccgccaccac gcccggctaa ttttttttgt    9480

atttttagta gagatggggt ttcaccatgt tagccaggat ggtctcgatc tcctgacctc    9540

gtgatccgcc tgcctcggcc tcccaaagcg ctaggattac agacgtgagc cactgcgcct    9600

ggccaagttg atggatttaa cttcatgaaa atttttaaac cagtttttgt gtcatcttag    9660

ttaaaataag aacattataa agtttggtaa aggaatgaaa gcattactaa gccaggataa    9720

ttatcaagtg cctttatata aacattttcc taaaattcta gtttctaaag·ttctgttaga    9780

accttataag ataattagta gtatgggaaa agaattactg gcataagaat gacattctta    9840

gttgtagtaa ccgtatattt atatttctcc ttcagtttat tttgaaatta aatttctaaa    9900

gtttaaaggt aaacatttta attataaatt ctgcattcat gccttctaat taaaatatga    9960
```

```
accaaattca tagaaatcct ataaggcaac gattacttaa aaaccaaaca acttaagtga   10020

attgttttta ggtttgtatt gccttatgta taaaaatcaa catttgttga ttttgccttg   10080

gatataacac ctctcatatt taaagccaga aaacacatgt tgccagatgg gaactaggaa   10140

gagtagtagt ctcatcttgg catcattttc ttcataatga ccagttcact tgttttacac   10200

ataatctcag gttctttcca gctttaattt tctatgattg acggatcaga ttctacatta   10260

cggaaccttt tagttacctg ctaactgctg ttacaccact caagatgcgt gataaccagt   10320

cagattagaa gatgaaagtc ttggccaggt gcagtggctc atgcctgtaa tcctagcact   10380

ttgggaggcc taggtgggca gatcacttga ggtcaggagt tcgaaaccag cctggccaac   10440

atgatgagat ctcgtctcta ctaaaaatac aaaacaatta gcctggcgtg ttggcaggca   10500

cctgtaatcc cagctactca ggaggctgag gcaggagaat cccttgaacc tgggaggtgg   10560

aggttgcagt gagtggagat tgtgccactg cactccaggc tgggcgacag agcgagactc   10620

tgtctcaaaa aaaaaaaaaa aaaaaaaaaa aaaaaagag aagatgaaag tcttcatgat   10680

attgctgggc acggtggctc acgcctgtaa tcccagcact ttggaaggct gaggtgggca   10740

gaatacctga ttttttttttt tttttttttt tggagacagt tttgctgttg ccgcccagtc   10800

tggagcgcag taccgcgatc tcagctcact gcaacctctg ccttccgagt tcaagtaatt   10860

ctcctgcctc agcctcctga gtagctggga ttacaggcac ccgccaccac gactggctaa   10920

tttttgtatt tttagtagag atggaatttt gccacgctgg ccaggctggt ctcgatcccc   10980

tgacctcagg caatccgcct gcctttgcct cccaaagtga tgggattaca ggtgtgagcc   11040

accacgccca gcctttaaaa tgacctttt tttttttta aagacactct cactctgtca   11100

ccctagttgg agtgcagcgg cgccatctcg gctcactgca acctctgcct gttgggttca   11160

agcgattctg ctgcctcagc tccctgagta gctgggacta caggcacgta ccaccatgcc   11220

cagctaattt tttattttta gtagagatgg ggtttcacca tgttggccag gctggtctca   11280

aacttctgac ctcaggtgat ccgcccgcct tggcctacca aagtgtgctg ggattacagg   11340

agtgagccac cacgcctggc cttaaaataa tttttacag gagatatcta tagggatagg   11400

tcaagaatct acagtccttg gctggcgctt aacttgcaaa ggaccgtgat ttataactgg   11460

ttttaaattt tttagactgg tgggatcttc cacttggtgt ggctggaaaa gagtgattta   11520

ttattggaag tccagtaagg ccagttctat ctaaactgtt agaatagctg taagtgatgt   11580

ggctttactg agattccatg aaaaaaataa aatatttgat gccatgacat aaggctttt   11640
```

```
tttttttttaa tttttttggtg ggattggtta aaagcttggc tctgaagtta gaatgacttg   11700

gatttaattt ctagctccac cacttactgg atgtatgact ttgggttgag tttacctttc   11760

gatgtctcag tgttttcaag tgaagtaggg ataatattga actgtacttt catctagctc   11820

actattctgt gtttcatagg gctgtcagga ggattaaatg ggagtaataa gtggaatgca   11880

tttatcacaa tacctcactc agatgttaga gcaagtattt gttcacatag tgattttta   11940

ctttaaacac taaaattaca cattattttt atataaataa agagtatata ttatttgaat   12000

tatgaagtat actttgaagg ctattcttga acccactcct tgaactgaag aacgggacgg   12060

tcagttcgta tagtgtacct gctccctgaa tctttcttcc cgaagtcatc ctgcttctat   12120

ccttgaagtc acagctatct ttgagttaat aattaacttc atttaaaaaa ctttgaaaaa   12180

gtctcatttg gatgtgtcct tgaacaatgt ttagttttct tgtttttttt agctttccaa   12240

aaatataatg gatgtaatgt ggtggctttc taaattgtaa gatccaacca tgttgtgtat   12300

aattcatttt taccatccct gtattgtatt cttttgcatg gcttcattag aattcatttt   12360

tcaaatctgc aattgataaa cattagagtt tcttctagct tttgaagtgt gaacaacgtt   12420

gcaatgatca ttttttgtat ctcgtttaaa atatttttat tgctctaaag ttttaaacaa   12480

acttgatttt aactgctaat atatttgctt tcaatgtggt ggtactactt tagaaaaagt   12540

aaattttctt tctttttta aattttagac agggtctcac actgttgccc aggctgaact   12600

gcagtgccat gatcttggct tactgcagcc tctgccgccc agtctcaagc gatactccca   12660

cctcagcctc ttgagtagct gggactacag gcgcttgcca ccacacttga ctaattaata   12720

tttttacatt tttggtagag atggggattt caacatgttg cccagggtgg tctcgaactg   12780

agctcaagcg atccacctgc ctcggcctcc tgaagtgctg ggattacagg tgtgaggcac   12840

catactaagc caaaagtaaa ttttcttact gaaatgtttt atacattgtt tcttgtttta   12900

ttagctaagt tatttcatat cacttttat ttatcatagg attagcaata agcactgtaa   12960

ttttccttaa gtacttgatt tcaaaaaacc aactttatta aagcataata tacatacaaa   13020

atatttacca accttacatt tacaatttaa tgagttttga caaatgtgac catcaccaca   13080

gtcatgatat aaaacatttc taccattccc taaagttctt tgtgcctctg tgcaatcagt   13140

catctccact ggtccctagc aaccagaaga aacctccaac tggtctgctt tatgtcacta   13200

ctgtttacc ttttctaaaa tttcatgtga atagtattcc cattttgtgt gtgttacacc   13260

ttttataatt gtcccaccat tcttggatat tcttttcttt ttcattttct ctttcttttt   13320

cagttttggg gagtttgtat tgatcttaag gctctctggt ctcccactcc tatgtttggt   13380
```

18

```
ctactgatga gcccatcaaa ggcattttgc atttctgtta gtctttttttg attctaacct  13440

gtgctttttt tttttttttt gggaggggga gatggagttt cgctctgtcg cctaggctgg  13500

agtgcagtgg tgcgatctcg gctaactgta acctctgcct cccgggttca tgccattctc  13560

ctgcctcagc ctcccgagta gctgggatta caggtactcg ccaccaagcc cagctacttt  13620

ttgtgttttt agtagagata gggtctctcc atattgtcca ggctggtctt gaactcctga  13680

cctcaggtga tccaccggcc tcggcctccc aaagtgctgg gattacaggt gtgagccacc  13740

gcacctggcc taacctttcc ttttgattcc tccttagagt ttttatctct ctgcttacat  13800

tacccatctc ttcttgcatg ttgtctgctt tccccattag agcccgttaa catattaatc  13860

atagttaaga ttccatgatt ggttttttaga tttttagaat aaatgttttt aaagaaccag  13920

gcttctgccg ggcgtggtgg ctcacgcctg taatcccagc actttaggag gccgaggtgg  13980

gcggatcatg aggtcaggag attgagacca tcctggctaa cgcaatgaaa ccccatctcc  14040

actaaaaaat acaaaaaaat tagccaggcg tggtggcggg cgcctgtagt cccagctact  14100

ctggaggctg aggcaggaga atggcgtgaa tgtgggaggc ggagcttgca gtgagccaag  14160

atcacgccac tgcactccag cctgggcgat agggcgagac tctgtctcaa aaaaaaaaa  14220

aaaaaaaaga acctggcttc tttactgttt actagcgaac tttggaagca tcatttacat  14280

gtattatcaa acctgttttt atttatttt attttgagat ggagtttcgc tctgtcgctc  14340

aggttggagt gccgtggcac aatctctgct cactgcaacc tccacctcct gggttcacgc  14400

ggttctcctg cctcagcctc ctgagtagct gggattacag gtgcgtgcca ccatgcctgg  14460

ctaattttttg ttatttttag tagagacagg gtttcaccat gttggccaag ctggtctcga  14520

actcctgacc tcaagtgatc ctcctgcctt ggcctcccaa agtgctggga ttacaggcat  14580

gagccaccac acctggctga aacctatttt tattattagt gctcatgatt tctcatttaa  14640

gaatatacat aatcacacag cttacacaca aatattcata gcaacagtat tcatagtagc  14700

agaacaacaa cttaaatttc catcagctga taggtgcata aataaaatgt ggtgtatcca  14760

tacagtgaag tattagccag aaataaaaag caatgaagta cagtcatgta gcatataaca  14820

atgtttcagt caatgaagga ataggaccac atatatgaca gtggttccat aagattatac  14880

tgtattttta ctgtacctttt tctatgttta gatatgctta gatacacaaa taccattgta  14940

ttacacttgc ctgcgctatt caatatatta acatgcagta taggtatagg tttgttgcgt  15000

aggagctgta ggctatacca tatagcctag atttaggctg tattatctag gtttgttaag  15060
```

```
ggacactctg tgatgtttgc acaatgatga aatggaatga aggcacattt ctcgtaatgt   15120

atccctgtca ttaagctagg catgactgaa ccgatatgtg ctacaatgtt gatgtatttg   15180

aaaacactat gctaagtaaa agaagccagt cacaaagaac tagatattgt gtgatgccat   15240

ttatattaaa tgtcctgaat aggtaaatcc ataaagacgc aaatacgtaa gtggttgtca   15300

agggcagggg tgaataggtg gaaggttggg ttatatgagg ttgaggggt gggaatggga   15360

gcagggggga ataacagcta agggattttg agttcttttt gggataatga aaatgttcta   15420

aaattgatta cagtgagagt tacacaactc tgaaatatac taaaagccag tcgtgcactt   15480

taagcatata atatgtgaat taatatctca gtaaagctgt taaagaatct agctgatgta   15540

tgcaaaactg ctaagaacac tatgatgtca tacagaaatt ttatggaaaa atattacttt   15600

cctcatgaca ctgatctcaa aaggtttcct atctcaaaca ttgttagatt tcaaaaataa   15660

gatgttaatt gcactcactt caaattttaa aaaaccttat tcagtctttt tatagaggtc   15720

atcctgtaat tatatggtca atatgaattc cagcagcata tcttttttcat gtgtcaagaa   15780

agtttacatt gaaaagattg cattcttaaa aagaccatac ccagatccat ctccacttcc   15840

tgtttgtcca ctaaacattt gtgagatatt tatggctatc ttgcgcaatg cctccagaaa   15900

tcaatgtttg ctctcaagtt tataactaca gtttaaaaaa aattcaccaa aaaattcata   15960

atcctggtgg atctgctgtt taggactagt tagttaagtg cagtatatac aagtagaaaa   16020

gctccaatta ttttacttga gatgatctga tggctaattc tctcacttcc tttgtgtgtg   16080

tgtgtgtgtg tgtgtgtgtg tgtgtgtatt ttatatattt tatatatata tatttttta   16140

tttttatttt ttttgagatg gagtcttgct gtgttgccca ggctggagtg cagtggcacg   16200

atcttggctc actgcaagct ccacctcccg ggttcacgcc attctcctgc cttagcctcc   16260

caagtagctg ggactacagg cgcccaccac cacgcccagc taattttttg tatttttagt   16320

agagacagga tttcatcatg ttggccagac tggtctcgaa ctcgtgacct cagacaatct   16380

gcccgcctcg gcctcccaaa gtggtgggat ttcaggcgtg agccaccgcg catggccgca   16440

tttataattt taaaagctta aatgtgtttt ttttttttgg cgggcgtgtg ggttggggga   16500

gatggagtct cagtctgtca cccaggctct agtgcagtgg tgtgatctcg gctcacttca   16560

gcctccgcct tccaagctca gtcctgccac ctaagccacc caagtagctg ggactacagg   16620

cgtacactag cacacccagc taacgttttg tattttttggt agagatgggg tttttgccatg   16680

ttgcccagtc tggtttcgaa ctcctgggct caagctatct gccctccttg gcctcccaaa   16740

gtgttgggat tacgggcatg agccactgtc cctggcaaaa aaaaaaaaa aaaaagatag   16800
```

20

```
aattcaaaaa ttgtatcttg aatttagtgt tgctcatatg acaacttact gtaaaaggta   16860

atttatttta agtataggtc acatactata caggggatgc tttcaaaaga caattcctat   16920

tgataattgt attttattat taaagtcaaa gaatgtctta gtctgctttc tggtgttctg   16980

ttctagtgtt ctggtcttct agggttagaa actaggtagt ttataaaaga aaggtttatt   17040

tagcacatga ttctggaagc tgggaagtct gagatctggt cagcttctgg tgagggcctt   17100

gtgccatgtc gtaacaccac ggtggagaag aggaagggga agcaggcatg tgcaaagtta   17160

ccaacacaag aggtggtctc actttgtaac aacccactct ttagtccaaa cctgtgggag   17220

caagaactca agggagtgag aaaggcatta atccatctta acgacttact tgcctcttaa   17280

aggcaccact tccgaatacc acatcgcgga ccaagcctca acatgagttt tgtggagata   17340

aactatattc aaaccatagc aaagaccaaa ggttatggcg gtttactttc tgctaagctt   17400

tcagatatag acatgaaaat cgttagatcg gtaataatat agctttatag tacttaattt   17460

tgtaacttaa ttaagaaata gaattagcct aaatatcagc tcaataatct aataaaaggt   17520

gaactgctgt acaaatagtc cagtttgtat cactgttata aatgagccta tctcatgtgc   17580

caaacttta gagtaattgc cttcttacga ttttgtctgt ttccaaaaac ttctaattgg   17640

agtatgcttt tgaatctgtg taatatttaa catataaagc ctgcattatt tagaagttga   17700

tattgaaaac ctttaaactt ctgacctcaa atagaatttg cttatgtata accattacat   17760

gcagctggtg ggttcaaaat tgcgtttct gggtctctgc tctgtgaaaa atagtatgta   17820

ttggacatga gtacatgaca gctgacattt atcaaggata acaggggag ccatattcat   17880

tttcacattt taaagcaact ttgaaagctt tgcatgtgca cacatgctca acatatgttc   17940

ctaagctta aatatatttt ccatcatgta ttgcttatca ttaatataag aaactaagtg   18000

taaatcttta atgagctcaa tatattaaac ttatatgagt acacaagcat ttggaagatc   18060

agcaatgcag gctacttcat tcatttacat ggaatttatc ttttatagtt tctgtgctat   18120

tacaaataat gtaacacatt ccagatagcc cttttgttat atagtgtttg atttggccct   18180

tctttaattt cattaccata aaattttgtc ctgttgtaga agactaaatg gtagaaatta   18240

acttttttct aaaccaacta ttgttatatt gctgttctct ttgccaagct atttataggg   18300

ctattttact ggagggtgac ataaatagaa ttggaatggc ataattgtta gtctgagttc   18360

ttagcctta aaaattttct ttaaattgtg ataattcaaa aagaattcta gaataaaact   18420

gtaaagctca taatgttgcc aacttgttaa ttaaataac acctttgtg gttggtatag   18480
```

21

```
gtttcagata ctgtgaccat ttaatatatt tatatgcaga tcacattgac ttgctgcaag   18540

gtaacaggag aaatgctttg acttcagaag ataaattggc catgcacagc tgtaatccta   18600

ctgtcttttc atttccagac atgattcagt agtttaaggc tttgattcct aggcgctgag   18660

aagaaagttg aaatttattt ttgtgtatga gaatttttac ttaggttttt gataagtcta   18720

gtttgtggtg tgaaggtacc atctaaactg ttggtgtttc catacttaaa tagctctctc   18780

ttaattttat ttgaaatatg agaagcctga gtttctttcc attttccttt tggcagttgg   18840

aaaggaagcc atcttattaa gagtgatgaa tagtgaaggg ttttttttag gctaaattgc   18900

cagtgtcttt agattaaaaa aaattgcaga gcgataagtt atgaacgtta acatgatttt   18960

tcaaggaaga agtaatcctt agtcacttgt aacccaaatg cctttcctaa taagagttcc   19020

gtttctacaa attcttttga cagagaagtg tatgatatca gagaggtttt tagaaaacat   19080

tttaagtgcc ataagaacaa ttcaagacca ctaccaaaac ttcatttgaa gatcttagca   19140

tctttgagaa tttagtattt ctcaagagac atctcttaaa ttctcctgta ggcaccaaga   19200

tttagacaat ttgcttaatt tattcagcta attaaatggg agagttccct gacccccctc   19260

acaggacgtg cgacagggct gtggctcatc tgttccgtgc tctcaaaccc cttttgggag   19320

gaggagcatg cgtgcaggca ggtgcaggat ctggggcgag tgcccctggg ctctgttctc   19380

atgggagtgt ccaggggtgg gagtctgcaa ctcccccaagc ccaagtaggc atgtgttaca   19440

gtatgctctt tttgctttgc cgaccatgga cggcttaagt gttaaacagc tcagggcctt   19500

cttggtattc aggtccttgt ccagcatcga ggaagaatca ggtcacacac ggacttgagg   19560

atggtgaatg tggggatttt attgagtgat ggagttggct gtcagttgga tggatgagga   19620

gctggaaagg ggatggagtg ggaaaatgat cttcccctgg aatttggcca tccagtggcc   19680

catctcctct ctgaccgtcc tcagccgaac tcctcttggt gttcagatgt tccttctctt   19740

ctttctctgc cgtgccattc tgccattctt ctgctcttct gtttgtctcc ttgtggagcc   19800

gggggcttgg ggtttatatg ggtacaggat atgggggcgt ggtgggtcaa aaggcaactt   19860

ttaggcatga aaacaggaat gtttgttctc atttagggtc atgggttttc aggcttgagt   19920

ggggcctttg ccagggaact gccttcttct acccagtatt tccctgtctc ctgtctgtat   19980

cagtaatata ggaattagaa aacacaaata tctttttttg taaactaggt tgtagatctg   20040

tttgtagtta agaggccaaa ttccattttt cttaattacc ttgattctgt ctgtaaatgg   20100

tacagttctt gagggagcca ttttttcgaga gcctaccatt tgccagacat cactgaggtt   20160

ttgttttacc tgtggttttt aatcctctca acaactttgt aaaggtgatg gatgtgcatt   20220
```

22

```
ttagagaaga tgaaattgag cttcagagat gtaaatttgg taaggtcatg ctgagctcaa  20280

atcagctgtt aagtctgtgt tcttttcccc tcttcactat gcttcattta agttggattc  20340

gttgttttct tgttcactaa tgatgtgtgc ttgtgtgtcc agtttaggaa ttaaccttgt  20400

ctattgattc ttggtttcag acaagtatcc catgtctgtc tagagtttgg ctgtggataa  20460

ttgatgatac tatcttttca aattatttat aattcgtgaa agcttatagt tcttttaaca  20520

tccatttatt cttctgtttc tttttatcat tcgtaatggc tttcaattat tattttaaaa  20580

atcgagatgg gagcttgcta tgttgcccag gctggtctca aactcctggg ctcaagtgag  20640

cctcccacct cagctttcca aagtgctggc aatgtaggct tgagccactg tgcctggcca  20700

attctttatc tcattaagga tcataaacat ttattttaaa ccaatttcaa gatttttatt  20760

aagcattgaa ttcatctttt gatattgatg aatttcttga ctatcttcct tagttcagtt  20820

attttttatt tttatttatt tttttttgagg tggggtcttg ctctgtcact caggctggag  20880

tgcagtggcg agatctcggc tcactgcaac cttcacctcc aaggttcaag tgattctcct  20940

gccctcagcc tcctgagtag ctgggactac aggcgcatgc cactacccccc ggccaatctt  21000

tgtattttta gtagagacag tgtttcacca tgttggccag gatggtctcg atctcttgac  21060

ctcgtgatcc gcccgccttg gcctcccaaa gtgctgggat aataggcgtg agccaccacg  21120

cctggcccat tagttcactt tttaaataca ctttaggatt ttagtttatg gtttatatgc  21180

tgagtgggaa ataatttttt tccctttatt ttggtgttct tttctgtatg tctccctgcc  21240

acctatacct ctgttttttgt tgccttcata catttacacc atgctttcag tctagatcta  21300

ggattctaat tctgagatat tattgcaatg ttggtgatat gcattactta ggttttgttt  21360

gtgtgtgtgt gtgtatgaga catatatata ttattattat gtatatatta cctttttattt  21420

atttagagta ccttttattt cctctacaac tgcctgtggc agtttgaaat aataacttta  21480

gctattgata ataccttttt tcaccttcct ttcatgagtt ttttgtttgg tttctaccta  21540

tgagattttt tcgtttttacc tgtgagcctt gcttttggtt ttcttatctt gtgcatgatt  21600

tcatttcctg actgcctttg cttgtttctt gtcctggagc tcagttgggt tcatggagtt  21660

attaatttat tgctttatat ttcccctctg tcatggtcca caaatatatt tgtcatgttt  21720

gagcgtaact gtgtcttttg aagttaatac aaaattcgta ttttatctgt cattattata  21780

tttggagcaa tgggataagg tggtgttgat tgatagcagc atttctctgt tatcctttca  21840

ggaagtctcc atgttctttt gatctcacaa catggcttgt ttatataggc ctgcagatag  21900
```

```
tagatactaa agcatctgtt tatttactta cttatctgct tacttgcttt atttacttac   21960

caccacccct gactaatttt tttgtatttt gtagagacag tgtcctgcca cattgcccag   22020

gctggtcttg aacttctggc aagtgaccct ctactgtagc ctcccaaagt attgggatta   22080

taggcatgag ccactgctcc tggccctaaa acatttatta catgaacgtg gggtatcttg   22140

gagaagccag acccagtttc aggctctcag ccccaacctt aatctaatat agtggctctc   22200

aacgtgtggt gcgtggactc ccggtagtct ctgagaacct tttaagggtt ctacatggtt   22260

aagactattc tcataataat gctaatgtgt tatttgctat tttcatcccg ttggtgtttg   22320

caccgatggt ggaaatgcgg tgatgcataa aattgctgac accttaccat gaattaaggc   22380

agtggcgcca gactccgctc ctaggtagac attgcattct tcactgccag gagctcataa   22440

agaaaaaaaa aaatcagttt tccactgagg attgtccatg atgaagcagc aacactacac   22500

ctggccctca ttcccttttt tccttaagta cctttcactg tacccttaag tactgtcgtt   22560

ttaatgttct gtgtgatgag aatggaaaat gtgcacaaag acttctgcct gccaaagtat   22620

gatggctgtc tccgggaaaa gcacttgcgc agtttgcgtt gtgaactgaa gtacccactt   22680

ttttcatgga acaccatttt tacttggatg agtgacaaac catggctatt gagtcttggt   22740

tatttggaga ctgtcttcaa attgagtgag gtgaacctgt cactacaggg aaaacatctg   22800

actgtattgg ttgacagtga taaaatttga gcttcaagtg aaattataag taagtaaact   22860

tgaatcggcc accatgagca taacagcctt ttattacttt cctgatgaga tgggtggtga   22920

cattaatgaa tgtgggttaa aaaaattgtg taatgaaatg taccagcatt tgaaagatct   22980

actttaactc agtgaaccag tattatctaa atgacccggt gtttgattat acagtgatgc   23040

atgggttaaa gatctgttca gagtgcaagt tagatccaat gcattttaat gagacagcat   23100

gaaaattcat ttatatggtt tcagattcca cttttgcaact gtaggagact agaatatacc   23160

accctaaaat atgcctgttt ggtgtaagga ttattttgag aagcagacac aggagaagtt   23220

ctgaaaacag agtagaagtt acccttttgt aagggaaaat ttatatctat aaaggaaatc   23280

tcccttgtaa gggtgtcttc ctcattacca ggaaaaggat gactcaatca ctagaaactt   23340

actaatggag aaggcataga cttaaatctg tataacaagc cttactgttg tttaccatgc   23400

ttttcttggt cacctctcca taactattgc tccctagccc ctgtgccctt ctttatttgt   23460

ttcagctgaa gatgatattt aagtctgaat tctaagccac ctcttagaaa tgaaaagatt   23520

tactcatttc tctgggtatc tctcatggat acatgagata tatttattat atttctgatt   23580

ttctcttgtt aatttgtctt ttgttaaggg gtctgaccca acttagaact cagatagggt   23640
```

```
agaggaaaaa ttattttttt ctctcctata aaactcacct ttaagaaatt accagttgtt   23700

ttagtgtaat atcaagaaat atccataatt atttataaaa gtttattaaa atagtccttc   23760

cttttacaag tacatgtctt tgtgaggcca gattttcttt atatccttaa atcaagataa   23820

cattgcaccg gattgaatgc agaagtaaat aactgttttc tattaagtca ggtaattata   23880

tgcaaatata tgttttaat tattttataa ttctcattgt ttcagaagtt ttgtttttg    23940

caaaaattgt tatttatgtt aatatatgat gggctttaaa aagtgaatga gggccaggta   24000

tagtggctca tgcctgtaat cccagcactt taggaggcca ggcaggtata tcacctgagg   24060

tcaggagttt gagactagcc tggccaacat ggtgaaaccc tgtctctact aaaaatacaa   24120

aaattagccg ggcatggtgg cgggcacctg taatcccaac tacttgggag ctggggcag    24180

gagaatcgct cgaactgggg aggtggaggt tgcagtgagt caagattgcg gcattgcact   24240

ccagcccagc ctgggtgaca agagcaaaac tccatctcaa aaaacaaaac aaaacaaata   24300

aaccaaaaaa gtgaatgagt ccggcttggt ggctcatgcc tgtaattcca cactttgtg    24360

aggccgaggt gggagaattg cttgagccta ggagttggag accagcctgg gaaacatagc   24420

aagacctggt ctgtactaaa aattaaaaaa atcagctggg catggtggca catgcgtgtg   24480

gttccagcta ctcgggaggc tgaggtggga ggatcacttc agaccagcag atcgaggcta   24540

cagtgagccg tgatcacacc attgcactcc agcctgggtg acagagctga gaccctgtct   24600

ccaaaaaaaa aaaaaaaaaa aaggtgaatg tttcttaagt tttaatttct aatatggtga   24660

atactgacat aacccacata gcagaagtta ttacaggttt ccagttttta agaggtaaag   24720

gaatcctgag atcaaaaggc ttgaaatcta gtgaatttgg ttggaactct agaagcattt   24780

gacttaaacc tttcaccttg ttgtatttgg tatcttgtag cacacccagt tcctgctaca   24840

gctgcctcta ttctgtgctg cttaaatacg gaggaggtct gagctaacca atctgaagtt   24900

tggccaattt caggggcatt tagttgttaa cctgaatcta cttctttat tagtaagaaa    24960

catatctact atagagattt aggactttga acagctgtat aacattatag gatatgtctg   25020

gtactcagtt gtttctgttt ctgaatcaca aatcggccat taattttaaa taaagacgtt   25080

ttgtagcata taatacaatt tctgatgatc tacttactag tttgttaatt cctcacaccg   25140

agtcatcagc tccttgaagg caaaaaaatt cctgtttga tcaacaattc atctacccca    25200

agcacttagc atagggata ctatttcctt tttctatgtg gatgacaccc gatatgttga    25260

acagtgacca ctcttaagat acttggtgaa gtaggttttg gttttaacca gtttaggtgt   25320
```

```
atggatgatt ttacagaagt tcgtaataaa attttcttgc ctcagatatt ctctaataat   25380

aatgaggtgc ccccagcttc atttactaga catggatagg caggttttgt gaagtacaga   25440

aaaaaagttc tttaaagtta tggatcatgt cacgaggtca ggagtttgag accatcctgg   25500

ccaacatggt gaaaccccat ctctactaaa atacaaaaaa attagctggt tgtggtggtg   25560

cacacctgta gtcccagcta ctcaggaggc cgaggcaggg gaattccttg aactcgggag   25620

gcagagattg tggtgagccg agattgcacc actgcactcc agcccgggtg acagggcgag   25680

actccgtctc aaaaaaaaaa aaaagttat ggatcatgaa actaacattt gaatagcaac   25740

aaagaaaaaa ccaagctatg ttgtatttta ttttttattt ttatttttta atgttgtatt   25800

ttaaattgaa tgatgtactt ctcctcctct ttgcagtatt ttatattttt gcttactgca   25860

catttcttcc ctgaagcaat cttgacctaa tggtataaat gtttagctcc acataagacg   25920

gtagctattt tttggagagg aatggagagg gtcaagggtt ttattgagtt ttcagttctg   25980

atacctttta accttttac cagtgctacc ccaccctcca gaaagcaaat aatgttgaaa   26040

gcttttttta tttttttaact ttttgatata tattttctta ttcattattt gtattgttgt   26100

catcagatga ataatggctt tagagattta tttgaaaaga caaattctat tatcagacac   26160

ataacttcta gggatatgga aactattatt attgttactg ttttgagacg ggatcttgct   26220

ctgtccccca ggccagagtg cggtgatcat ggttcactgc agacttgacc tcctgggctc   26280

aagtgatcct cttacctgag cttcctaaat agctgggacc acaggcacat gctgccatgc   26340

ccagctaatt tttgtgtttt ttgcagagac agaatctcac tatgttgccc aggctggtct   26400

caaactgctg ggctcaagca atcctcttgc cccagcctcc caaagcgttg ggattacagg   26460

tgtgagctac tgaaactggc ccggaaacat ttttaaaaaa ggattctttt gaatttaaag   26520

ttatttaatg attactgaag agtaataagc tgtgaggtca ggaaaaaaag gactgagcca   26580

cagactaagc agcagtacag atgatgacct attcaggaag tcttgtgagt cagacttgcc   26640

gtgtcgtgtt gctagagtta cagatctgct ccaacctctt tgctttataa gaaggacatc   26700

tctctgttct accttcaata tcttttcttt gaaaaatcaa cccaaaagtc ttttattagc   26760

tttacattta tttctacagt cttaattttt gtaacatcag tgttgcaggt gaacaaactc   26820

attgtagcct ctattttga tattgctgga cagggctaac tttagtacta tagtggggaag   26880

tttgttattt tgttttttac tctacaggca ctctggttta ggaatattta tctgtcttgc   26940

atttgaccat ggttaccatt cccctcttc attgtttact tagtgtacca tggtacactt   27000

tatgtaccat ccttgctgct ctcagctgtt tggttaccag gtggctaatg ttgtcatctc   27060
```

```
ttaagcttta acatttactt ctcaatactg tcttttcctc tgtgaggtag atggaaagaa   27120

tagattagaa gagaatgggg catatgctgt gatcatctct cctttacatc tttattgctt   27180

attaatttaa tttatatcag atttcatttc tgctctgtgc acatacccac tgtccctcct   27240

caccactctt ctttatccag ttctttctca cttaccttag catggctaaa acccttggtt   27300

tttatttatc tctttcttcc tctgctgttt ttattttcat tatatgccac agggacaaac   27360

ttaggtataa gtactacttt tgatgtagag atacttatgt ctgtcaaagg aaaattaaac   27420

tacaaacccc agaggtaaaa aatggtacac aatactgggg tttaaaaaat ctcctcctcg   27480

gccgggctca tgcctgtaat cccaggactt tgggaggctg gggtaggttg gtcacctgag   27540

gtcaggagtt cgagaccagc ctggccaaca tggcgaaacc ccgactctac taataataca   27600

gaaatgaggt gggtatggtg gcagctgcct gtaatcccgg ctacttggga ggctgaggca   27660

ggagaatcgc ttgaatctgg gaggcggaag ttttagtaag ccgagattgc gccactgcac   27720

tccagcctgg gtgacagagc gagactccat ctcaaaaaca aaacaaaaca aaataaaaaa   27780

gccccactcc ttctgcccct ccagaccagg gtctcactcc cttcacccag gctggagtgc   27840

agtggcgcga accttagctc actgtaacct ctgcctcctg ggctcaggtg ataccccac    27900

ctcagcctcc cgagtagctg cgactacagg tgtgcgtcac cacgcttggc taagtgtttt   27960

gtattttttg tagagacggc gttttgccac tttgcccagg ctggtcttga agtcccgggt   28020

tcaagctgtc ctctcatctt ggcctcccaa agtgttgaga ttacaagtgt gagccaccac   28080

acccagccaa attatttctt tttacctctg taaaaggaga accttctctg tattttaaga   28140

agatgtggag ttggtcaaaa gtacagctga tgggaaagca aaggagaact ggagtttgaa   28200

aagagaagag gaatggtggt agttaaaaaa aaatttgta aaaaatagag ttacatacaa    28260

gtttacacaa tggtttagag cttacaaggt aggaagcaga gacagaaata gtgtaatatg   28320

taaaatgtta tagtaaaaat atggaaaatg cttaggataa agaagggaaa acttttgtct   28380

aattgggaga gtcggggatg gttttaccag aggtgacaaa ttaatcttga agggcaggaa   28440

tattctagat ggaaaagcga tgtgggaaag attaaaaaaa aattagtgac ttaaggttaa   28500

aaataaagga aatgtttcag ttacctttat taaaaacttt tagtataaag atcattttgg   28560

ggttgctggt ggtgattgat gaggaagaag tatgactggt aacaggttgt ttaaactgaa   28620

gccaaattca ggtttatgaa gctcagactt aagtctgttc ttatatatga gatagattca   28680

gtgtattaaa ttgtagaagt caatgtaacc tttaaaacaa aagagttacc cggctagtta   28740
```

27

```
gtatgctgtc aggagagggt aacttgattt ggatatggat ggaattggct cccttaactc   28800

cctctgtaca gtgtattatc tgtgaacttc aactctgttg ctcatgtaga ggttgagaag   28860

tctcttggca gcaagtttcc agttgcaact aacacctgag ttggctaatt ggtatgccca   28920

gttctagcac tctagtctct ggggagttta tgtttaaatt caacttcatc aggtttaaac   28980

tggaacataa atgtgcaaga aggaagagag aatggaacct tgcgcataaa ataatttaca   29040

ttcagatgct tttctgttca atttatatat taaaaatagg atgttttact ttattgtttc   29100

ttgctagccc ttcactcaat atgctggcat tataaagcaa agatagtgga gaagaaatta   29160

ccaagaactg aagttgtact gttttcttgt atacatctcc accaaggtag tttcttgtag   29220

ataccatgtg tatgttttgt ttctaaaaac tgtaggctcc tagctttgct attcattgtg   29280

ttcaaacgat tccttctttt tttttttttt taacacttac caaatttaat tgttttttctg   29340

ttttcctgtt ctgctagcct gagagttcta gtaattggta gtgacattta tccctgtttt   29400

ctggggctaa aatgattctg ggcatgcaaa acgtttgagc tgaaatggaa ttaaattgaa   29460

aaaaaaaaaa aggattgtgt tatactttat cctacaaaac ataatagcaa attatcagcc   29520

acaaacaaa aggatataaa aaatttccct ctctgacaga ggatgaggaa gcaaaagaaa    29580

aataaataag taggccaggc gcggcggctc acgcctgtaa tcccagcact ttgggaggct   29640

gaggccggtg gatcatgagg tcaggagttc aagaccagcc tttccaagat ggtgaaaccc   29700

cgtctctact aaaaatataa aaattagctg ggcgtggtgg tgggtgcctg taatcccagc   29760

tactcgggag gctgaggcag gagaatcgct tgaacctggg aggcggaggt tgcactgaga   29820

ttgcgctact gcactctagc ctgggcgaca gagcaagact ctgtcttaaa aaaaaaaaaa   29880

aattaaaaaa aattttcttt tctttcccct cctacttatc tcctcacagc tcttaacttc   29940

cttaccagca ttgaaagaaa caaaggtagg aggagatact aactggaaga gtcatccact   30000

tgaggaggaa gcttttataa cagttccacg ttataaaagc tcttccctgc cttcccctgt   30060

cctttacaca cgttatattt gtcttcagtc ctttctccgt ggtaccagtt ctcttggagc   30120

tcctcttatt ttattagtaa gggtatgaat gacggattga aagaaagaag attaagaaac   30180

ttttgatat ttttagggta gagaaaaaaa ccttgtaaga ttaagcccttt gtgttaacta   30240

gtagtggtta ttttctaagt tgtctgatta ggaatttgag aatttggaat ttcagttttg   30300

ggtagaactt ttatgtatga ctgtctcatt cttcccaaga acttgttttt tctgattgac   30360

ttgagcagtc tctgcttttg catagtgctt gaagcagttt ttaataaacc agttcagatc   30420

catagctctt tgaaaaaatt tccataagtt actgtgattc tcaagaaata caccaaacct   30480
```

```
ctctctaatt agtgtattta atcatacctt gtataagtta gggaaacaag cctgacagat  30540

aaactaaatt gctgctggga tagtcaagtg gctccaccat ttaatgatag caaaccaaag  30600

aataacaata cttgactgac cattttaagg tatagtttgt atatgtcgat ctcaaatttt  30660

ccttttgctg tgtgagccat tgaccatctc aagtggaagt aagggttatg ggtaatatta  30720

gaccaccacg aagggcagtt tagtgacatc ggtgggtaat ggttaggtaa ggtacttgag  30780

gggagcatta gtatctgctg agcttgagca actccttgcc tctgtcccta atactgcatg  30840

cccctaaact atggctgtca taacctctca gtgttcttac tgataagctg agaaattttc  30900

tggctaactg gttggctata gtgtgattca gtagtacaaa tggcttgttt tggtggtggt  30960

ggggaataaa atgcccaaga aacatttgat acatattttg ttggttatga agtctgaaaa  31020

aatattgtag ttccagctct gccatccaga atctgtgtgt gctctagtgg aaagttagcc  31080

atttccttat ctgtaaaatg ggactattat agtaatacat actctggagg gtcatggtaa  31140

ataaattaca gtatatatga gatgtctagt attgtactac cacaaaatta tctccttatt  31200

tctcccttat taatttagga aaagtaaaat attttagttg gtttctatgt caatttagat  31260

ttactggata acccatctgc tattttggca cactatagct tttttttaggt ccctcaaaat  31320

aacttcttgc ttgcctaatg aacactggta gtgttgattg atatcttttc cttttggaca  31380

gggcgtagtt cctgtatcct tgtccattta gctaatttgc tgtgtataat caaacttttt  31440

ccctcctgtc ttaatcccaa ataaccaaaa ggaaagctga ttagtgctgc taagccatat  31500

accaaaattt tcatggtttt tgagctagca ggtataattc tttgctgctt ttcagcttta  31560

attagttagt tattccatga aagttcattt tctaacaatt tattatatat tctgttgatg  31620

tctaagcttc aacatgttcc atagcttgaa tgttacgtat agaaaggcct atagtattta  31680

taggaaacat tctatccagt tgttgtaaga tacttgttca ttttaaatct tatcatggat  31740

atactttgga cttttccata taatatagaa atagcgttag attttgatag cattgaaagg  31800

tattctcatt gttactattc tacattaaag taattgtgac gagacgtggt ggctcacgcc  31860

tgtaattcca gctctttggg aggctgaggc gggtggatca cttgaggtca ggtgtttgag  31920

accagcctga ccaatatggt gaaaccccat ctctactaaa aatagaaaaa ctaggccagg  31980

gtggtggcag cgcctgtag tcccagctac tcaggaggct gaggcaggag aattgcttga  32040

atctgggagg tggaggttgc agtgagccga gattgcacca ctgcactcca cccgcccccc  32100

gcccccaccc cccgccccgc caaaaaaaag taattgcatg gaatatattg cttaaatgca  32160
```

```
ggtttttttt tttggacgga gtttcattct tgttgcccag gctggagtac aatggcacaa   32220

tcccggctca ctgcaacctc cacctcctgg gttcaagcaa tcctcctgcc tcagtccccc   32280

aagtagctgg gattacaggc atgtgtcacc acgcccggct aattttgtac ttttagtaga   32340

gatggggttt caccatgttg gtcaggctgg tctcgaactc ctgacctcag gtgatccgcc   32400

cacctcggcc tcccaaagtg ctaggattac aggcgtgagc caccccgccc agccttttaa   32460

aaatgcagtc ttaaagtgtg cattgccata tttaatacat ttaagtagtg tagcatacaa   32520

ctttttttag tggaaacatt ttagataagg aaaataattg taaaaatggc tcatggatct   32580

ggatgataga gtttatattg aaagattgac ttggtttttag cctttgaatt ctgataaaat   32640

gagaagttct tccttccagt tcttttctgt actttggtgc caggggcttg aaaaggcttc   32700

tgagactgga ttgtgtatct tcttggaagt gcattagagg tgcagtggaa acttcaaaat   32760

atggatgcat ctcacaattg gatgtatgat gtaacttcag gaggacagat tacttggtag   32820

caagtatagg tcctaatttc ttttctattc aactataagt gataatatct aattgtaggg   32880

agtcagaatt aagaagggac tctatgttaa tagactgttc ttttttttct tttttagacg   32940

gagtctcact ctgtcatcca ggctggagtg cagtggcgcg tcttggctc actggcaact   33000

tctgcctctc gggtttaagc ttttctcctg cctcagcttc ctgagtagct gggactacat   33060

gtgcatgcca ccatgcccag ctaatttttg tattttttagt agagatagg tttcaccatg   33120

ttggccaggc tggtcttgaa ctcctgacct caggtgatcc acccgcctcg gcctcccaaa   33180

gtgctgggat tacaggcgtg agccaccgcg cctggcctag actgttctta caatcaaact   33240

tagtgtgaga ctgttgtgct atattatttg ccctttgaag atggctttta tcaactacat   33300

atattctcca aactagatgg gttgtaattt aagatgtaaa aatgtaagct agtctcaggt   33360

agttactgtt ccatgtttct taccggttaa gaacttcatg gtcttggtac ctgccttatt   33420

cccctctctc atcttcattc ttgactgttg actgaaagtg atctagatct attgtgtctg   33480

tgctaggcat ttacctttta tatcttaatc taccaaaata gcatatcctc ccagtgagaa   33540

ggagataaca ggcgtggcaa ctaaaacaaa tgccattttt gattttttgt ttatagctaa   33600

gattaatacc aaatagaaaa ctgtacctga agggttagtc atagtcattt gtgctcagga   33660

attattgtat atattgaaat tattattttg gggaccagaa atgctttttt atttctcatg   33720

ttgaacattt tctttagttt aatgaaattc aggagatgtt tgctctactt tgcttttttgt   33780

tataaaacaa tttgtcattt actcttagac attgtggtat cttatacagt tgtacagtaa   33840

atgtacctaa gttttgtcca tgtctaatta agaactacaa atctgtccaa cctgttccta   33900
```

30

```
aaaaacccaa gatagagact ggacatggtg gctcatgcct gtgattgcag cgctttggga   33960

ggctgacgtg ggcagatcag ttgaggtcag gagttcgaga ccagcctggc catcatggtg   34020

aaaccctgtc tctattgaaa atacaaaaat tagccaggcg tggtggcaca cacctataat   34080

ctcagctact cgggaggctg agacgagaat catttgaacc cgggaggcgg aggttgcagt   34140

gaactgagat catgccactg cactccagcc tgggtgacag agtgagactc ttgtctcaaa   34200

agcaaaacaa aacaaaaaat aagatagaaa tattttatat cttaaacaat tataccttta   34260

tgttcgggta aacacctttt tcatgatttt aagttattat tttcccttag tttttttttt   34320

tttttttttt ttatagacag aattcactct tgctgcctag gctggagtgc caatggccca   34380

atcttggctt actgcaacct ccatctccca ggttcaagca attctcctgt ctcagcctcc   34440

tgagtagctg gaattacaga catgcaccac cacgtttggc taattttgta tttttagtag   34500

agatggagtt tctccatgtt ggtcaggctg gtctcgaact cccgacctca ggtgattcgc   34560

ccatcttggc ctcccaaagt gctgggatta catgcatgag gcaccacacc cggccttccc   34620

ttagtacctt tttggataat taggttggac tctgaaggag taagtttggt agcaggaaga   34680

ttgcacaggc ttatgtgtac agtgtagctt gttttgtgag atcaagagaa aaagctgcat   34740

gtgtctatgg acatagctcg acatatttag gtttcattat atgcacataa acattggctt   34800

aacacaaatg atctgcattt ctggtttaaa ctgatatttg tgcttattaa ttttttttgca  34860

tattaagaga ttgtcatgac ttagttttтc tattgattta atttatgctg tcagaattta   34920

ttgtaacact atatcaactg tagaagtaaa catttaaaaa gtttaatgca gtaggattgc   34980

attgaatgat tgttatagat cagaataaag gaaatttcta aactatgatt tagtaggttg   35040

aatgttgctt ttatatttat tcaatattta ttcaagacat atattgacca cctattacat   35100

ggtaggcccc ttactcctta ctgagtattc aacttatatt taataacaaa ggaaataata   35160

ttgagaatat aggcaaaatt ttatctttca aattaaagaa gtgctgttat ccatggaata   35220

gtttctccat ttgtttcagg gattcagctt ataaacaaaa gccaaagtaa ggaaataata   35280

tctagaatgt ggaataaatt acatatttaa aataaagaaa tgtaggctgg gtgtggtggg   35340

tcatgcctgt aatcccagca ctttgggagg ctgaggcagg cggataactt gaacccagga   35400

gttcaagacc agcctgggca acatagtgag accctgtctc tccaaaaaat acaaaaatta   35460

gctgggtgtg gtggtgctca cctgttgtcc cagctacttg ggatactgag gcaggaggat   35520

tgcttgagcc tgggaagccg aggttacagt gagctgagat tgtgccactg cacttcagcc   35580
```

```
tgggtgacac agtaagaccc tgtctttaaa aaaaaaaaaa aaaaaaagtt attactcaat   35640

ggatagtttg ccattcaatt taaaaatcac ctttgaatga aacaaatata aaaccaatta   35700

tagagacata acaagaatta ttctattttt gtacttaagg aatggaatca ctattctttt   35760

tatttttatt ttttgagatg gagtcacact ctgttaccca ggcctggagt gcagtggcgg   35820

gatctcagct cactgcaacc tccgccttcc gggttcatgc gattctcctg cctcagcctc   35880

ccaagtagct gggactacag gcgcctgcca ccacgcccag ctaatttttg tattttttagt   35940

agagacaggg tttcaccata ttggccaggc tggtctcgat ctcctgacct tgtgattcac   36000

ccgcctcggc ctcccaaagt ggtgggatta caggcgtgag ccactgcacc tggctcttta   36060

attattcaat ttattattat tattgttttt aagagacaga gtctcactcg gtcacccagt   36120

ctggagtgca ttggcgtgat cataactcac tgcagcctca aactcctcaa acaagcagtc   36180

ttcctgtttt attcctaagt agttaatgct ataggtgtgc accatgatgc ctggcttatt   36240

tttaaaaaaa ttttgtagag acagggtgtt actgtgttgc acagattggt ctcaaactca   36300

agtgcctcaa actcaaactg cctgagcctc ccaaagcact gggattactt gagctactct   36360

ttttaaatat gaaaattgga aaatcaaaac cgaacatacc tttaagttta aaactctttt   36420

atttgaggat aattttaaac ttaaagcaag gttgcaagaa aatagtacaa agagttttta   36480

cgtttatctc cccccgggt caggattcac ctagtgtcaa ctcccttcct catccttgct    36540

ctgcctgtcc ccattcccag gtttattcac tcactcatta tatatgcaat ttttcttaac   36600

catctgagga taatttgcat atgtaatagc ctgttacccc aaatattata ctaagaatat   36660

tggtctctta aataaccgtc gttcatttat caacttaagt gtattaatat tgacaacata   36720

cttttatgtc tattgtccat attctaattt tgtcagttga tccaataata ttctttatag   36780

cattttctta ccctctagca caggattcag tctaggatca aatattgcat ttagttgtca   36840

ttttcttata gcttccttta aaatctggac tgtttacaga ctttctttgt cttttgtgac   36900

attgacacgt ttgaaaatac aataccctg agattgtgtg atctgactgt gccactacta    36960

ataatagtga gccactacta ataaaggtta ttttaagtct ttttctgtcc ttcatttaaa   37020

cttgtcatgg ggaaaaaaca aatacttaaa tcatctcagc tttttagcct ttccatttta   37080

caaccaaagt tatagaatga attttcttgg taatttaata catatttagt gcatctgtaa   37140

agacaatgtt gcaatctaga tttctgatt  tatattatga tcatgtgatt ttttaaattt   37200

ttattttttt tgtttttttg cttttgattt tttttttaaa gctacacatt tgaagtttga   37260

tcagcatctt gagtgaattt tttcattttt ataaatctgt cttccttcct ggtagcattc   37320
```

```
tgccacctag tggaaattta tgtcctccag catacgtctc agagtttagt tggaatgcaa   37380

gatgcatttt aatatataaa aattagttta gaatcgttga acttctttgg ttgacatgta   37440

attctttaca acagtgatcg tcttgtttta aacaagagtt tagtacagat aaaattctta   37500

gcaaatgagg gcttagtaga tgtcttaaat catctttctc aacaagaagt actctacatt   37560

tatcttcttc atcaatgaaa ttttaaccaa agcatactat ttttccatca gtcaaatttt   37620

tttttttttt tttgagacgg agtctagctc ttgtcaccca ggctggagtg cagtggtgcc   37680

atctcggctc actgcaacgt ctacccctcg gttcaagtga ttctcctgcc tcagcctccc   37740

aaataactag gattacaggc acctgccacc atggctggct aatttttttat ttttagtaga   37800

gacggggttt caccatgttg gccagacggg atttcaccat gttggtcagg ctggtctcaa   37860

actcctgacc tcaggtgatc cacctgcctc gacctcccaa agtgctggga ctacaggcat   37920

gagctaccgc accctgcaag atacacattt ttagtaggac ttgaggaaca tttctgtctt   37980

ggagtacata cgttctgcat aattcatatt agaatatgaa atctgaggtt gtcttcagta   38040

tagtcattta tgaaaaagaa tattgagaat tatctgttta gagaaagtag ttctgaatta   38100

aaagttgcag tcattcagtc atataacacc ttcatagagt catgtatatt ttttaatgta   38160

cttatcttat ttctcattat tctctcttag ttgctgatgt atattcaaga tgagtggatt   38220

aggagaaaac ttggatccac tggccagtga ttcacgaaaa cgcaaattgc catgtgatac   38280

tccaggacaa gggtaggtga cttatttcct ggtgctttac cacacttgtt gtgcctttgt   38340

ttaaggataa cattttaact tcttgccatt tacattctct ggttagattt tttggtggtt   38400

tcacttcgtg gtaagtagag tgttactgat gagatggaca tcttttttgat gtaatagaag   38460

tttttttttt attgctgatt catatagaag gtagaatatt aacaattcgc ggtactataa   38520

gaatttctga atggaaggag gggtaggagt tacgaataga tgaccaaggt tatgtcacgt   38580

gcgtccgtgt gaagagacca ccagactttg tgtgagcaac aaggctgttt atttcacctg   38640

ggtacaggca ggctgagtcc aaaaagagag tcagcaaagg gtggtgggat tatcattagt   38700

tcttataggt tttggggatag gcagtgagtt aggagcaatg ttttgcgggc ggggttagat   38760

ctcacaaagt acattctcaa gggtagggag aattacaaag aaccttctta agggtggggg   38820

agattacaaa gtacattgat caagttaggg tggggcagaa acatcacaat ggtggaatgt   38880

catcagttaa ggctattttc acttcttttg tggatcttca gttgcttcag accatctgga   38940

tgtatatgtg caggcttggt ctcagaggcc tgacagttat aagtaagaat ctttgctatc   39000
```

```
ttttaagaat gggttataag ttgatatttt gtcatttgtg aggttgcatc cttttttttta   39060

ccaagtgaaa tgagaagctt aaaaattaga aacaaaataa tgtaatctat ataacactac   39120

tctatagctt ttaaagtatt tgccaaagtc agtgtcaatt gaagtttaat gtgctagttg   39180

aaaaatatca atctacaatg aataaaactt catcattaat aagtagctac cactgttttt   39240

gttcttattt gttagttgtt ttattatctc taagaagtaa agatgattta ttcgtatttt   39300

ctagatgaag taactgaggc taactctgcc caaggccacc tagctaacaa agatggaact   39360

gaatttaggt ttacatgaat ctctattatg ttgtactact tctccaagac agcattttg   39420

atagtttata ttggctgagt ttagtttgtt tacatatgaa aataataggc cgggtgtggt   39480

ggctcatgcc tgtaatccca gcactctggg aggccagggt gggtggatta cctgaggtca   39540

ggagttcaag accagcctga ccaacatggt gaaacatcgt ctcaactaaa aatgcaaaaa   39600

taagccaggc gtggtggcgc atgcctgtaa tcccagctac tggggaggct gagtcaggag   39660

aattgcctga atcctggagg tggaggttgc attgagccaa agtcgcaccg ttgtactcca   39720

gcctgggcaa caagagcgaa aactctgtct cgaggaaaaa aaaaaaaaag taatcatgta   39780

atagtgttgt ataggggctg attctgctaa cagctctttt gtgatatata tattatgtct   39840

cctttccccc ctttctacgc cttttccctt agtcttacct gcagtggtga aaaacggaga   39900

cgggagcagg aaagtaaata tattgaagaa ttggctgagc tgatatctgc caatcttagt   39960

gatattgaca atttcaatgt caaaccagat aaatgtgcga ttttaaagga aacagtaaga   40020

cagatacgtc aaataaaaga gcaaggtaat aaaaacactc atgtctttt gaacagtggt   40080

ggttcccaac ctttttggca ccagggactg gtttgtgga agccagtttt tccatggacc   40140

tggtagaggg gatggtttca ggatgattca agcacattac gtttgtggtg cattttattt   40200

ctattatggt tacattgtaa catataatga ataattata caactcacca taatatagaa   40260

atcagtagga gccctgagct tgttttcctg cagctagatg gatccatctg ggggtaatgg   40320

gagaaactgt gacagatcat taggcattag agaatcataa ggagcacaca acctagattc   40380

ctcgcatgtg gagttcacat taagatttgc acacctgtga gaatctaatg ctacttctga   40440

gctgacagga tgtagaactc aggtggtaat gtgagtgatg gggagggct gttgttaata   40500

cagatgaaac tttgctcact tgcccactgc tgacctcctg ctgtgcagcc ccattcctaa   40560

caggccacag actgatactt gtctgtggtc tggggggttgg ggacccctgt tttagaagga   40620

acttgttgct atatttgcct ttttgctcct ttgtttgggt agagactaca actgatggag   40680

gctagcaagt atgggaatag acaaatgtgt tgaccagctg tgctttttgt tatttatgta   40740
```

                                             34

```
tttatttatt ttgagatggt gtctcgcttt gtctctcggg ctggagtgca gtggtgtgat  40800

ctcagctcac cacaacctcc acctcttggg ttcaagagat tctcctgcct cagcctcccg  40860

agtagctagg attacaggca cctgccacca cgcccagcta agttttgtat ttttagtaga  40920

gatggggttt tgccatgttg gccaggctgg tctcaaactc ctgacctcag gtgatccacc  40980

cgcctcagcc tcccagagtg ctgggattac aggtgtgagc caccgcgctg ggcctccagc  41040

ttatgctctt tagagacggt taacagacaa ttgcctgtta tttggtagtt ccttttcagg  41100

aagctgtggg atagtacatt tagtagtgaa atgatttagg tatcttctgg cttcctgggc  41160

aactatgaag tttagttttg atgttataat attgtagcat cattctctta tgaggaaatg  41220

ttttgtatgt atgtatgggc atgtgcatgt gtatctttat gtctcttctg gggactattc  41280

gaaggtgatt taatctataa ctgatagtgt gttattcgtt ataccacctt ctgtcttttc  41340

aggaaaaact atttccaatg atgatgatgt tcaaaaagcc gatgtatctt ctacagggca  41400

gggagttatt gataaagact ccttaggacc gcttttactt caggcaagta taaagatttt  41460

aactgtccag taggctgtat tgcccctttgg tttattataa agttataaaa aatcgatgaa  41520

attttggtta ggaaatgaga acaaaaagaa aacatttttt tctttgagac agttcagtat  41580

tctgaatatg atggtaaaat gctcttataa ttacaatata cataattcag gaagccttgc  41640

cccctagta aaaatatagt tgcaaactga ggaaccacac atatacaaac ataaaaatat  41700

aagcaagcag gaaaggaaag gtagcctgta atttcacaga gatatttggg tacaaatggc  41760

ccttcatatc catgggtttt gcaccacaga tttggaggct gaggaagaaa taaaaaataa  41820

tgttaaaaca ataaaaaaca cctcagtgtg atgactatat agcacttaca ttgtattagg  41880

tattataact aatctagaga tgatttaaag tatattggaa tatatgcata ggctataggc  41940

aaatacacca ttttatattg gagacttgag catcctcaga ttttgctatc tttgggaggt  42000

cttggaacca accttacaca gatactgggg tatgatgact gtacgtttcg gctcagacat  42060

ttttggtgaa tttttgcgtg attgatcaca tggcacgcta tggtttttata ttcttgagga  42120

attgttaaga cttaaacatg tgctttgtat ttgtttaggg gctgaagccc ttcataaagt  42180

taacttgtca acttcttttt gtttcaggta gtttgttcca actactttta gttgatcagt  42240

tttgaaattc ctctttgtaa attctcatta aggaatagta gagcagtttc tgtagcttga  42300

cttggcatca aatggaaaaa tgggaagagc taaggatgct tttctcattt ttaaaagctc  42360

ctttaaagat ataattcttt aaaaattagg ttagacatta attcagattt catgctgaac  42420
```

```
atatttatgt acacactccc ccacccccaa ttattcttct ttttttttcc ccccagtaag   42480

gcctgtagta atggtgctaa tgttagtagt aatggtggct tatagttgtt tgcagtaatt   42540

aagtcagcag tagttttac acattctact tactactgtg gttgctgttt gctgatacta    42600

ccataacaaa ataccacaga cttggtaggt gaaaccaaat aaatttattt cttacagtgt    42660

tggtggctgg aagtccagga tcaaggtgtc agcaggattg gcttctcctt ggcttgtcac    42720

tgtgttctcc catggccttt ttctctgcgt gcacattcct ggtgtctttc tctcccctta    42780

taggatacca gtcatattgg attagggtcc ccaccgttat gacctcattt atctttaatt    42840

acctccttga aggtcttgtt tccaaataca gttacactga tggttagagt ttcaatttaa    42900

gaattagagg gaggaggata caattcagtc cataacagcc tgtattaaca tatcctattt    42960

taggcattgg atggtttcct atttgtggtg aatcgagacg gaaacattgt atttgtatca    43020

gaaaatgtca cacaatacct gcaatataag caagaggacc tggttaacac aagtgtttac    43080

aatatcttac atgaagaaga cagaaaggat tttcttaaga atttaccaaa atctacaggt    43140

aggcttttaa tgtgtatttt ctaaataggt taaattttt tccttgacca tttcttagaa    43200

aattgaatgt atcttttagg aagtcaagcg atcaaatgag ggtagaaagg catgtgattt    43260

aatagcagaa ttttcacata tggagtcagt gaattaaaaa tttggtatac attttaagag    43320

gcatatagtt acaaaatatg cagtgagatt tctgttaaag ttgaaattat tcacatgttt    43380

tgtatattgc cagcctgaaa tgttagtata gatataacta tggaaaacat gcataatgag    43440

aaaatgcagc ttgaattctt gatgatggtc atagaatgag ttaccagctt tttaaaatgt    43500

catttcaatt tgttttccaa agttaatgga gtttcctgga caaatgagac ccaaagacaa    43560

aaaagccata catttaattg ccgtatgttg atgaaaacac cacatgatat tctggaagac    43620

ataaacgcca gtcctgaaat gcgccagaga tatgaaacaa tgcagtgctt tgccctgtct    43680

cagccacgag ctatgatgga ggaaggggaa ggtaagagct attatatgtt tgtgatgttc    43740

atgaaacaaa tagtggccat acttggagtt ttgaaacttg tgttgtaacc cttcttactg    43800

aattccatgt ctttgcttgc ctattgaaca tatatatcca aaagttaagt ataatcctta    43860

ccagggtgaa ttttttattg tagatttgca atcttgtatg atctgtgtgg cacgccgcat    43920

tactacagga gaaagaacat ttccatcaaa ccctgagagc tttattacca gacatgatct    43980

ttcaggtaaa aactcttttt ttgtctctct ctctctctgt gtatacgtac attttattt    44040

tggaaatttt tgtaaatgtt actattttta atctgtacta tcatagaaat gtatacctac    44100

tgtaatgagt gctttatgtg tatctttttt catgttgctt atgcaacctt aaaagaattt    44160
```

36

```
cactaaaatt cttggcattt gaattgggta tgtttggcat tttaaatccc ccagataaat   44220

taaaaaaaaa atttaggggc acctggtttt ctctccaaat tgcattttgc gtcagaattt   44280

agtatttctt taacttcaag cccatttgtc ataaagaaac atgttttaaa aaattataag   44340

taatttaatg agaattattg ggagtaattc cttttttttt ttttttttgt tgagacggag   44400

tcttgctctg ttgcccaggc tggagtgcaa tggtgcgatc tcggctcact gcaacctcca   44460

cttcttgggt tcaagtgatt ttcctgccat ggcctcccaa acagtttgga ctacaggcac   44520

gtgccaccat gcccggctaa ttttttgtatt tttagtagag atggggtttc accatgttgt   44580

ccaggctggt ctcgaactct tgacctcaag tgagtcgcct gcctcagcct cccaaaatgc   44640

tgggattaca gttgtgagcc actgtgcttg gccgggagta attcttgacg tcaacctgag   44700

tttcaatctt ggtctgccat ttttttaatca tagaaataaa aaattaaaga catcgtggtt   44760

gataagatgc attaatgaaa ttaaacactg tggcaatatt atttttattt accttcaggg   44820

ttactcttat ggtcacctaa gtgtaaatgg ggatgccaag ggtttgtcat atatgcccca   44880

tctcagagat aaagaaacag aagcttggtg acagagattg ggttattgtc caagatcatg   44940

gctaataaga aaatttatag ctgagtctgc ctgacttagc ctgtattctt tgctttgtgt   45000

aacactaatt ttacaatgtg gacttttaac aagtgatata aaaatggagt aggtatacat   45060

aaaacatagc tatcactatt acatatgtat gtgtgtgttt gtaatatgta tatataatat   45120

acataatgca gaatattttt aaagaaatat tgctattttt gcagtcattc aatcatttta   45180

tgccatcagt aacctatctt caggattttt gagattaatt ttcacaatta aaagtagcaa   45240

aggattattt tgacaattca cagtataatc ttgtttacgc tgatggatgt tacttttttt   45300

tttttttgag acggagtttt gctctgtcgt gcccaggctg gagtgcaatg gcatgatctc   45360

agctcactgc aacctctgcc tcctgggttc aagtgattct cctgcctcag cctcccgagt   45420

agctgaaatt acaggcgccc atcaccacgc ctggctaatt ttttacattt ttagtagaga   45480

cagggtttca caatgttggt caggctggtc tcaaagtcct gacctcaggt aatccgcctg   45540

cctcggcctc ccaaagtgtt gggattacag gcatgagcca ccatgcccgg ctgtatgtta   45600

ctttatattt gaacattttc tctgtattaa ctcccctcag ataaacatag tgacagcaat   45660

tgttatatat tattttatcc ttttagagtg agtctttctc tgcacctctt atgatttggc   45720

agtgttaatt ttctacttga atagccatgt tttacatttg ctactgaaga tactaaataa   45780

aatatcttta agcaatttag caagtagcat ctttgaaaat tatctcatca gtatataaaa   45840
```

37

```
gtgatacatg tttattataa aagttagaaa ttaccaagca tgaaagaaaa caggacatga   45900

tggagaaaaa aattgccaag caagaaagat caaatgcttt gtgtgattaa catcatttaa   45960

aactgagatc ctacttactt ttgacctctg gggatatttt atcttctgtc cctgatgtgt   46020

ttcatttaat aaactttta tggacatctg ttttgtattt gtcatgtggc ccagggctaa   46080

actcaggaga ggtggttgag gacaaatcat gtctattttg ggcacgagtg cacaggtatt   46140

tactctttcc cagaatgcgt ttatcccttt tccctagtct ccccctgcta ctaataagat   46200

ttttggtcac cattaaaatt ctgaatttta aacagattat tggactggtg gtttatttct   46260

gtcagcttat tcaatattag tgcctttaa atctccagta gcttttgcag aattaccttt   46320

cactatgaag ccccatgagt tttcccaaac caaacttggt tttcttcagt atgttttcta   46380

atgaatatgt catagaaagg ataaatatat gggcaagact tttttttttt tttttttttt   46440

ttgagacgga gtctcgctct gttgcccagg ctggagtgca gtggcgagat ctcggctcac   46500

tgcaacctct gcctcccggg ttcaaaccat tctcctgcct cagcctcccg agttgctggg   46560

actacaggta tgtgccacca cactcagcta attttttgta tttttagtag agatggggtt   46620

tcaccatgtt agccaggatg gtctcgaact cctgacctca tgatccaccc acctcggcct   46680

cccaaagtgt tgggattaca ggcacgagcc accgcgcctg gcctgggcaa gccttttcaa   46740

tgtctttcct aatttgtctg gagtcagttt attgcccact tctttcaagt tatttgtctg   46800

taccttttgg gtcacaactt ccatcatcat tgggatttgg catatctgtt ggtgctgagc   46860

ataagagatt gcccaagtct gattattgca tttcttagta aaacctatac aaaacagata   46920

actattggca atcttgacat cagcaggagc ttcctatgaa gtctgccatg tttaaccatg   46980

gagcatattt tgtcacagaa aagattactg aggatgtcca ggtcaaaaac tgtgtgacca   47040

gttattatgg cttggatcat tctgtctgca ttcaaagaca tagaaaaggc ctgaaagctg   47100

atccaagacc agccatggaa gctggtcaca tagttttga cctggatgtc ctcagtaatt   47160

agtctgaatt ttctaagggc agtttcatca ttatgcagat cagcaaggtt catttcaaaa   47220

acacagttct tgaggccatc agatgcagtt ttggttcctt gagccctttt gactagtttg   47280

ttaccaatta aacacagctg gtgctttcac atcatatcag tcttttttag gaaatggatt   47340

aaccactttc ttctttgctc ccattctgcc acttttgta aggcacttgc ttttgccaac   47400

caccctagtg ctgcttagag tgaaaaggcc tagacagttt ttaaggacca tctattgtca   47460

tgaaaccttc tttaatttca tagtattttt gagtatgtat atttggtgtc tccattgtat   47520

ttgatattaa gcaaaagttg tcagaagctt ccagcattgt agaaatgagt atttggttaa   47580
```

```
ccctccaagt ttaggtatta agtgtacaaa aatgtgatca tctctcagat gcaaataatt   47640

gtccctgctg gcttacttta agtaggtatt ttctcttgct tatagttgta gggacagaat   47700

ctcttcggac aaacaacttt cctcataggc gttatttttt ccctttacac gaaaatgaac   47760

ttaaggttat ctggacatgt atattcagta cattcagaca gtaaaaggag tttgtgtgat   47820

atatattctg tacagcattt gggaaaacac tgttttttcta cactgccaca ccacttctga   47880

ccccagatgt attttttttct acactaacca gcgctctgtc tgacataagc tgggtgccct   47940

acaatttttag tttggacagt ttctacctgg gtttagcatt agatcttaca aggttaaggg   48000

ttcagtccca caagactgcc tgtactttac ttcagatgcc agttgcaagt cctggccttc   48060

tgtacttctg actgactggc tataaattgg gcttctgatc ctctccttag gtttgatgat   48120

ttgctagaat ggctcaagaa atccggaaat gctttactca ggtttactgg tttcttatga   48180

agggtacaac tcaggaatat ctcaatggga gaaatgtata ggagaaggta ttagggggtg   48240

gggatgaggt ttggaggttc catgccctct ctgggcttat agccttccca gcaccttaat   48300

gtactcatcc tttggaagct catcaaatct cttgttcaag aggtttttttt ttttttttttt   48360

ttaattggag atggagtctt gctctgttgc ctaggctgga gtgcagtggc acgatctcag   48420

ctcactgtaa cctctgcctc ccgggttcaa gcaattctcc tgcctcagcc tcccaagtag   48480

ctgggattac aggtacgcac caccacgccc agctaagttt tgtattctta atagagatgg   48540

ggtttcacca tgttgaccag gctggtctcg aactcttgac cttgtgatct gcttgccttg   48600

gcctcccaaa gtgctgggat tacagatgtg agccactgtt gctggcccga gtttttttttt   48660

tttgagatgg agtctcattc tattgccagg ccggagtgcg gtggcatgat ctcggctcac   48720

tgcaacctcc gcctgccagg ttccagcgat tctcctgcct caccctcccg agtagctggg   48780

actacaggcg cacactccca tgcccagcta attttttgtat ttttactaga gatggggttt   48840

caccatgttg gccaggatgg tcttgatatc ttgacctcgt gatctgcctg ccttggcctc   48900

ccaaagtgtt gggattacag gcgtgaggca ccgtgctagg ccaagagttt tttatagaat   48960

ttaatcacca ggctctcctt cctccctcat gccccattcc tggaggttag tagatggaac   49020

tactaacaga aagttccaat cctttaatta cttggtcttt ctgattatca gctccatcct   49080

gaggtgatct agagacccca ccctaagtct cctcatcagc ataaattgag gtgtgttcca   49140

aaggggctct ttatgaataa cttgaaaata cttttattac tcaggaaatt ctgaggattt   49200

tggatagggg ctctgtgcta gaaatctgac aaagaccaaa tgtattatta tactccttag   49260
```

```
cagaacatgt agggagaatc ctgtggtgct atgtcttaag gagaaaagct gtggatatag   49320

tagaaatttg gatcagagaa ggtggagcaa agatttaata tcttttatttt tattctccag   49380

tgctaagcca tgtgtaggca gccagtaaat acttgtgggc tggatataag tcttttttttc   49440

cttttttttgt ttaataggaa aggttgtcaa tatagataca aattcactga gatcctccat   49500

gaggcctggc tttgaagata taatccgaag gtgtattcag agattttta gtctaaatga   49560

tgggcagtca tggtcccaga aacgtcacta tcaagaaggt aaagaatttt ggggttgatt   49620

gttcttatca ttttattctt tagagacagg gccttgctat cttgcccagg ctggactcga   49680

actcctggat ttaattgacc cttctgcctc agcttctgag tagccaagac tgcaggtgca   49740

caccaccata cctggttttg tggttgattc ttgatcttgt ttgtcattat gtttggtata   49800

cacatgactg tagttgctct cttgttggtg aggggtagga aaatgatgcc tgagtgttct   49860

tattttaccc tgttgatgat tttggtgcag atccagtctt tccttggatt tttagaaatg   49920

tacttgaagt atatttcctc cctgtcccct cctatatata tttgtttttgc tgactgtagt   49980

taccagtgat gggatatttt ccccaacagc ttatcttaat ggccatgcag aaaccccagt   50040

atatcgattc tcgttggctg atggaactat agtgactgca cagacaaaaa gcaaactctt   50100

ccgaaatcct gtaacaaatg atcgacatgg ctttgtctca acccacttcc ttcagaggta   50160

atgatagatt actgtgtatt ctaatacaaa atgcagcagt gttctcaaaa tgctttatta   50220

ttaaagtaaa aagggaaggg ataaaatgag acaaaattta ggaaggttat tgggtttgat   50280

gaaatgagtt tagattcctg gattatgata tgtttaaggt tgtattttta tgtgaaagtg   50340

attatttatt aaatacttta caggaaagct aggtgatggg aaggctaatg ggtggataaa   50400

agagcacata aaatctgatt acatgtctta ccactcattt ctgataatgt gtgttgctttt   50460

ggggactgca tttaaaattt gagggtaaac ttcaagaata aaggtagtta ctgtctgggt   50520

tggtagtggc aaataagaaa tgcatgaagg ggaggatatt cacccattaa ttatcttgag   50580

taatttgcag gtaccccccag gtgaagccct agataatgtg gcaactctaa taaagcccac   50640

ctgaaactcc agttaacata gctgttggtc tttcataata ctacagtggt ctcactcata   50700

gattctgtgg cttactgaaa aatatgttac taggtaaata attgatcaat atgtagattg   50760

gaactgtcac taggtattgg aatgctgcct aaaaagttaa gttcctgggt agttaattca   50820

tcccattttt ttattccctc tccttctctc tcccttcttc ctttcttctt cttctcttct   50880

tctttttttt ttttttttttt tttaaacaga gacagagtct tgatctgtca cccaggcagg   50940

tgtgcagtag tgccatcaca gctcactgca acctcgaact cctgggctca ggcgatcctc   51000
```

40

```
ccaccgcagc ctcctgaata gctaggacta gagatgtgtg tcactatgcc tggccaattt   51060

ttaaattttt tgtagagaca tgatcttgct gtgttgccca ggttggtttc aaactcctga   51120

gctcaagtga tcctcctgcc tcagcttccc aaagtgctgg gaatataggt gttagccact   51180

gtagctggct ggttttttaa aattttattt tattttaaat ctgattaaaa gctttcatgc   51240

atgcttagaa ttttttagta aaagtttgat gtttgttttg cagagaacag aatggatata   51300

gaccaaaccc aaatcctgtt ggacaaggga ttagaccacc tatggctgga tgcaacagtt   51360

cggtaggcgg catgagtatg tcgccaaacc aaggcttaca gatgccgagc agcagggcct   51420

atggcttggc agaccctagc accacagggc agatgagtgg agctaggtat gggggttcca   51480

gtaacatagc ttcattgacc cctgggccag gcatgcaatc accatcttcc taccagaaca   51540

acaactatgg gctcaacatg agtagccccc cacatgggag tcctggtctt gccccaaacc   51600

agcagaatat catgatttct cctcgtaatc gtgggagtcc aaagatagcc tcacatcagt   51660

tttctcctgt tgcaggtatt tgtgttgaca tttccttttta ttttttttct ttttaagtaa   51720

ttattctttc catactacta taattcttgt aaagttaatc tattttataa tagaaacttt   51780

gaagaattaa gttgtatttt gttacagtgt ctggtagtct aattcttttc ctaaattttt   51840

tttcaaattc aggtgtgcac tctcccatgg catcttctgg caatactggg aaccacagct   51900

tttccagcag ctctctcagt gccctgcaag ccatcagtga aggtgtgggg acttcccttt   51960

tatctactct gtcatcacca ggccccaaat tggataactc tcccaatatg aatattaccc   52020

aaccaagtaa agtaagcaat caggattcca agagtcctct gggcttttat tgcgaccaaa   52080

atccagtgga gagttcaatg tgtcagtcaa atagcagaga tcacctcagt gacaaagaaa   52140

gtaaggagag cagtgttgag ggggcagaga atcaaagggg tcctttggaa agcaaaggtc   52200

ataaaaaatt actgcagtta cttacctgtt cttctgatga ccggggtcat tcctccttga   52260

ccaactcccc cctagattca agttgtaaag aatcttctgt tagtgtcacc agcccctctg   52320

gagtctcctc ctctacatct ggaggagtat cctctacatc caatatgcat gggtcactgt   52380

tacaagagaa gcaccggatt ttgcacaagt tgctgcagaa tgggaattca ccagctgagg   52440

tagccaagat tactgcagaa gccactggga aagacaccag cagtataact tcttgtgggg   52500

acggaaatgt tgtcaagcag gagcagctaa gtcctaagaa gaaggagaat aatgcacttc   52560

ttagatacct gctggacagg gatgatccta gtgatgcact ctctaaagaa ctacagcccc   52620

aagtggaagg agtggataat aaaatgagtc agtgcaccag ctccaccatt cctagctcaa   52680
```

```
gtcaagagaa agaccctaaa attaagacag agacaagtga agaggtaatt tgttttctgt    52740

atatttcagc tcatatttca tcattttcg gtgttagata atgtgatata aaaattcttc     52800

cattttaggt ttatttaaag aaagttaaat ctttagctct catttcttta taattatttt    52860

ggatgtcagt aaaattatga tgtaatttag aaataacaga tgtgtatgtt ttaagatgtg    52920

actataactc tttagtagcc aatatgaaat ttttcatgg aggtgtttat tgctggaatg     52980

ggcagattgg gtcattaaga gaatggtaga agtaatcagg aaaaaaaaaa cttgtattaa    53040

gcagcataat ttttatttta aggtaaaatc aagtttcatg cacaagatga cattctgtat    53100

aagcatttcc caaacttata ggatatatta atatgcactt gagaaaatga aaggcttaaa    53160

gttaggatgt gggcttaacc tactgttcac caaatttatt gaccgaagcc ctttttagag    53220

catgcctatg aacatcccag cttgctcctt ttattattaa tcacacttat tttcagaagg    53280

tttgtgtaga tgcagatatc tgttagctaa ttatcaatgc actgctagtg actgttacct    53340

gcaaaatatt ctacagtttg agaattaaat gtcttgtgta aatttaaaaa atgccccttt    53400

gaaaggacca aatgtagtga tttaatctca gaggaggaag attagagatg ggggtcataa    53460

taaactggcc tttcaggtgg gtattatcat tgtaggtagt ttttgtattt tacttgcttc    53520

tatttcatgt atcattttt ctgatgggta tgtttatacc tgtgtgtctg gtaatgtata     53580

caggttaatt tttaaaactt tattttcagg gatctggaga cttggataat ctagatgcta    53640

ttcttggtga tctgactagt tctgactttt acaataattc catatcctca aatggtagtc    53700

atctggggac taagcaacag gtgtttcaag gaactaattc tctgggtaag aatgaactag    53760

gttttttttt tttttgctgc ctttgaaact tttctgcata cctgtaaaca ctcttacact    53820

aagaccagga tataaatagc atttataact tcagaacata tattctgcct ctgtttttcta   53880

tactaattta tatgtgcttt agaaagcttt ttgaacattt tcctgttttt taaaaattaa    53940

ataaatttcc cacttctaac taatatgcca gtaatcatgg cacttataga aaaatattca    54000

tgtttgatta ttccaggtga gtactgtagg tactagggca tatatttttc ttagccacag    54060

agaactggat taaaaagcaa ctcagactct agattaaaac ctgtccattg gtgttttaac    54120

agaatcttgt catttaatta agatagtttt ctttggtgtt tgctggttct tatctagccc    54180

ctctcctgtt gctgtgtgtt gacttcatca atttaacaaa ggtaggccgg gcatggtggc    54240

tcacacctgt ggtcccagct actcgggagg ctaaggcatg agaatcgctt gaacctggga    54300

ggcgaaggtt gcagtgagcc aagattgcgc cactgcactc cagcctgggt gacagagtga    54360

gactccgtct caaacaaaca gacagaaaaa caaagatata ttgtgtgtgt caattgaaaa    54420
```

42

```
ggcagcatgc acaattattc agaatggtca ttattcagta gcattatttc ctaaactaga   54480

atggatagat caattaagag tgggggggaa aaaaagaagg ttagaagggg attttacatt   54540

ttatttcttt tcgatcagaa ggcaacttat ctggttaagt tgattgttaa aattataaac   54600

agtatactta agtacaaata tgcaagaacc ttcaggagct tggaacattt gtgaattttt   54660

caatattaag tgaagcgcag agtatcagtg accatatcag gctacagaaa agttctcagt   54720

acttcagccg acatggagat tgttgtttct actttatttg gaatatgaga cccttttttg   54780

gctggcaggg gggcggggg tggcggtggt gggtgagggc cacttccctc acttattttg   54840

taaaggaaga cagtgtttgt ttttgtaaga aagacattct tgggtggga gtggtggtat   54900

ttgtgttttg tacttgatta tttatatatt aaatcacgaa gaaatgtttt tgtattgtgt   54960

tttcaacagg tttgaaaagt tcacagtctg tgcagtctat tcgtcctcca tataaccgag   55020

cagtgtctct ggatagccct gtttctgttg gctcaagtcc tccagtaaaa aatatcagtg   55080

ctttccccat gttaccaaag caacccatgt tgggtgggaa tccaagaatg atggatagtc   55140

aggaaaatta tggctcaagt atgggtacgt tatttctaat tagtatgtat gattattttg   55200

ggaaaagcat atttaaaata cttaaagcca tctaaataat tgggagtaaa taataacttt   55260

ttgaataacg ttagtatgtt tcttccatga atatccttca tttattctat gttttggtta   55320

tgtaaactct tcaagagtct tttggtctat gacatttttcc agcctgttga atatatgaga   55380

atagtggcct atgtctccac agttggccag ccctttct ct accatgacaa agtgctgttt   55440

tgtcaaggtt gatgttgtgt ataatggctg tacttacatg gtataagaag gatttcatta   55500

taatatggaa aagacctaag tatggctacc tgttttaggt gggccaaacc gaaatgtgac   55560

tgtgactcag actccttcct caggagactg gggcttacca aactcaaagg ccggcagaat   55620

ggaacctatg aattcaaact ccatgggaag accaggagga gattataata cttctttacc   55680

cagacctgca ctgggtggct ctattcccac attgcctctt cggtctaata gcataccagg   55740

tgcgagacca gtattgcaac agcagcagca gatgcttcaa atgagtaagt gtccaccctc   55800

ccctcttcat gaaaaaagaa agttagatgt ttcaggataa tttttgctct tatttgagaa   55860

tttgtgcttt cttttttgctc ccccagggcc tggtgaaatc cccatgggaa tggggggctaa   55920

tccctatggc caagcagcag catctaacca actgggttcc tggcccgatg gcatgttgtc   55980

catggaacaa gtttctcatg gcactcaaaa taggtggggt gttattttgt gactctgtag   56040

aaaatctcag cattgggtag tttagaaaag agttggagca cagaagcaaa cgtgaaagag   56100
```

43

```
aatgagaatt ccctataatt gaggtactgg gttgccagct gggcatttct cgtgtaactc  56160

tgtgtaaaaa tgaggctgaa gcagtaagca gtgcgtgtgg cattcacagg agagggagga  56220

gatacaacca tgttgtccag ccattagggc cattcagtgg ccaaacctct gagagcctct  56280

ctgtgagatg attgtctctc tagtcccatg aggaggggaa aaaagataag tacatgtttc  56340

tagtggtttt ataaatgttc ttcagagggt tagcctcagt tttccagaaa attaaacttt  56400

tttaaaaaaa cttttctttt cccccaacca cctgctgcct attgagaaaa ttcttttaag  56460

gattggctaa ttgttttcta aaattatttt aaacatttca gtgatgatag tgaaataact  56520

atatagcatc tttaaaattt ttcataaaat aaagattgta ggcccggtgt ggtggctcac  56580

gcctgtaatc ccagcacttt gggaggccga ggcgggcaga tcacaaggtc aggagatcga  56640

gactatcctg gctaacaagg tgaaacccct gtctctacta aaaaaaaaaa aaaaaaaaaa  56700

ttagccgggt gtggtggtgt gtgcctgtag tcccagctac tcaggaggct gaggaaggag  56760

aatggcgtga acccgggtgg cggagcttgc agtgagctga gattatgcca ctgcacccca  56820

gcctgggcaa cagagtgaga ctccgtctct aaaaaaaaaa aaaattgtag attgtatta  56880

attttattt agcttagtaa tttacttgca tgcaagaggc catggtcaat gtcagctcta  56940

acaggaattc tacagtaagt taagcaagga aaataaaaat gaactgatct attgagcaga  57000

cagtgatgta actatatgaa tttatttgag tgcttctcta ctctatatga atttatttga  57060

atgcttctct actcaataga gagcaaatag tttcaagtta acagaacttt tctgaggcag  57120

gataaatgtt taacttcatg cccttgtatg tgttggagaa ctgaggcaac ttgctgtggg  57180

tgtatggggt ttgtgttaca cttgccaata tgagctctgt gggccaagtg tgacaaagtc  57240

attttggtat ttctccagac tcacgtcagt gatagctcaa catttctttt tttttttttt  57300

tttttttgag acggaatctg gctctgtcgc ccaggctgga gtgcagtggt gcaatctcgg  57360

ctcaaggatc tcctgggctc aagcaatctg cccacctcta cctcccaaag ttctgggatt  57420

acaggtgtca gccaccacgc ctggctccct tcttttttt tttttttttt tttttttttt  57480

gagacaaagt cttgctctct ctcccagcct ggagtgcagt ggcgcaatct cggatcactg  57540

caagctccgc ctcctgggtt catgccattc ccgcctcagc ctcccgacta gctggggcta  57600

caggcgctca ccaccacgcc tggctgattt tttgtatttt tagtagagac ggggtttcac  57660

cattcacagg atggtctcga tctcctgacc tcgtgatccg cccgcctcgg cctcccaaag  57720

tgctgggatt acaggcttga gccactgcgc ctggccatag ctcaacattt gtatccttcc  57780

ttttattctt ttgatttctc taattttcaa gtattataat tattacctcc ttcactgttt  57840
```

```
ttgtgaggag tatcttctcc catccttccc taccctcccc ctggccccca tttctgctat   57900

accccaaatg cctagggttt ggcaattaca atttggtgtt gggattgggg gtttaagctg   57960

tatatggtgg tctaaagtgg cctggtgaaa tttctaaatt gtgggcctta aacttaaatt   58020

gatgccattc actctttttt accacttggt ttattatttg tgtttgtagc atttgagtta   58080

ctgttcatta aaaatactat gcatggttgc tgtgatctat tactcttaga aaaaaaaaa   58140

gcaccattga cattgattgc aagtcttttt ctaggcctct tcttaggaat tccctggatg   58200

atcttgttgg gccaccttcc aacctggaag gccagagtga cgaaagagca ttattggacc   58260

agctgcacac tcttctcagc aacacagatg ccacaggcct ggaagaaatt gacagagctt   58320

tgggcattcc tgaacttgtc aatcaggtag gttgcattaa catggaagta ggagagtgta   58380

tatttgtgtg tgtgcgcgcg tacacattca tgaagccaca tacaagaatg cctgtgtgtg   58440

tctctcctag tacttgtgtt atatcactac attcatggat accagcatta aatttggaaa   58500

atatcctttt ttggtctcaa ttcgtatgtt aaaatagaaa atatacttac gattgcgata   58560

ttactttcaa caacccacta tttttggcaa ttgtagaaat gatttagtta agctactgta   58620

ctgttcttaa aaatgtgacc ttttattcat gttaacagtt ctcattttta taactatctt   58680

tctctactac ttagccaagc cgtgtgtatt ctgaggcaag cttttttttt gcttgtttgt   58740

ttaaacaaaa cttgtttaca atggccaagc tgaacatcct aacatcatgg tgtcctgttc   58800

ctgtttacat accccgcctt atgaaaacat gccattcaca aatctgtatt tctgaaagac   58860

acattctgta gtgactgttt tttctttttt gaatcggagt ctcgctctgt caaccaggct   58920

ggagtgcagt ggcacaattt catctcactg caacctccac ctccagggtt caagtgattc   58980

tcctgcctta gcctcgcgag tagctgtgat tacaggcacc cgccaccacg cccgggtaat   59040

ttctttgta tttttagtag agatgagatt ttgccatgtt ggccaggctg gtctcaaact   59100

tctgacctca agtgatccac tcgccttggc ctcccaaagt gctgggatta caggcgtgag   59160

ccaccgtgcc cagccatgac tgtttttatt taaaggctat ggaggggcca ctgtataggt   59220

ttgtgcgttc aacagtaagc aggaaagatc atcaggggct gtcagttgtt gttggggaaa   59280

tagatgtgta catatggaag tacactgcca tgtggcaaat gctgtcacag tgcagatggg   59340

aaacgctgag cagtccttgt gtacaccttc agggatacca gtgacataga accttggcac   59400

tgaggagcca tattttatac tccaacagaa gtatagaagt tctttttttat ttctttactt   59460

gttcaggcac actaaataac ccatcaattc cttccttccc tcctgtagtt ctctctgttt   59520
```

```
tactgtgtcc ttgtgaggca agtctagaaa ttaataattg tcactattcc cctgtgttgg  59580

actcctagta tcctgaatct caaatcgctt tctgtcttga tttactcctt tgtttttgctg  59640

caacacaact tctattaact tcttcatccc tactgcatga aataaaatgt tttgggttct  59700

atgtgtctga aaatatcttt attccaccct cctacatgtc tggctatgta ttacattcta  59760

ggtttaaaat aattatatac ttttgaaaga tttctgccat agtttttctgg catctagtgt  59820

ggccactgag ttgtatttct ttctgatttt gattcatttg catgtgaccc gtttattctc  59880

tttggaatga tttaggaact ttttctctcc gaaattttat gatgctgtat cttggtatgg  59940

gtctttttc attcattctg ctgtgtacta gatacactga tattcccttt ggtttagggg  60000

tgttttcttg tataatttct ttattaacct tatctctcct gtgtttttttt ttctgaccta  60060

cttttctggg atttctgttg acatgttggg cattaaattc gttctatttt tttttttttg  60120

agacggagtc tcgctctgtc gcccaggctg gagtgcagtg gcgtgatctt ggctcactgc  60180

aagctccacc tcctgggttc aagccattct cctgcctcag cctcccgagt agctgggact  60240

acaggtgccc gccaccacac ctggctaatt ttttgtattt ttagtagaga cggggtttca  60300

ccgtgttagc gaggatggtc tcgatcccct gacctcatga tccacccacc tcagcctccc  60360

aaagtgggat tacaggctgg gattacaggc gtgagccacc gcgcctggcc cttcattcta  60420

tattttgaag tcttctctat ttttcttgtc tttgatttgc ttgagtcacg ttcaagcttg  60480

gaaagtgttg gacgctttta tcaagtatct ggtgatccct gactgttctt atatgttaag  60540

agtgagacat taagaagctg atttgacact ttgcaagtgt gagcagcatc agttgtcttt  60600

actgagggta attaagtggg gaactagccc tagccctttt atttcaggac tccccaaatt  60660

tttatttatt tattttttgag acggagtctc tccctatcgc ccaggctgga gtgcagaagc  60720

gtgatctcgg ctcactgcaa cctccacctc ctgtgttcaa gcgattctcc tgcctcaacc  60780

tcctgagtag ctgggactac aggcgcacgc caccacgccc ggctttttttt tgtattttta  60840

gtaaagacgg ggtttcacca tattggccag gctggtctcg aactcctgac ctcgtgatcc  60900

acctgcctcg gcctcccaaa gtgctgagat tacaggtgtg agccaccgcg cctggccagg  60960

actccccaaa tttccacatg tagagttgtt ttcaaccacc actaccactc ctgccatctg  61020

gtaatctttt attacctggt tgcatttttgg gagctgggct agggaggcaa gtgtgggata  61080

ttaaattata aaatataaaa ttttatttaa attataaaata tgctaaatat aaaatttcct  61140

gttttcagcc tctgcctcac tcctttctta ggctctgctt ggtgcccctg aacccctgta  61200

cctttgtcgg gtaggtagaa ggtacaggcc tttcgggagt cagggagcag gcagggaggt  61260
```

46

```
agttgacctc ctgctctata ctcagactcc taaccaacct cctcatttca gcaccatgct  61320

ctgatcccct accaccctca ctggagtctc aatagatctg tggaatacat ttgcttgttt  61380

ttcatatgta tttttcctct gtgggcacat aagtctaagt ttttctgttc tgttgagctg  61440

gttcctactt ctctattcac tttgtatctt ctattataaa tatggaaata cttgatcttg  61500

ttgcgttatt agtgttttat ggataaatac tacctttaa gtatttttt tttaaataaa  61560

ctggatacct cttagttccc tttattgtca ttttagtagg gttagcaagt gaatgcaggt  61620

aagcatgcat gatcagtctg ccatgtttaa cttaaagtat agtttgcttt attaagacat  61680

cttcagccag gcatgatggt gtgtgcctgt agtcccagct actggggagg ctgaggtggg  61740

aggatcacat gaacccaagt tgatgggaca aaatagaaac atagtttcca gttactatgg  61800

taacagtcca agaggtgtcc tgggaagggt cataagggtg aaatggaaag aagggaggga  61860

tacatgatat gccctggagg aaaaattgac aggacttggt ggtcacacgt gtttactctt  61920

ggaaagggag aatgtgaaga atcaaattgc tgggtttgg ttcctgggca gtgaatggtg  61980

atgctgtgta ccgtcaccat ttgacatctg tgaggggttg gtttcaggac ccctgtggat  62040

accaaaatcc atggatgctc aagtccctta tataaaacag tctagtattt gcatatagcc  62100

tatgcacatc ctcccacata gtttaaatca gctctacatt acttataata cctaatacaa  62160

tgtaaatgtt atgtatatta tatagttgtt acactgtatt gtttagggaa ttattataag  62220

aagaatgatg actgtgtgta ttcagtcagg tacagctacc gtttccttcc cctggaatgt  62280

tttcagtccc ctgttggttg aatccatgag tgtggaacca tggatatgga gggccaactg  62340

tattgtgata tagtagggta ggttggagga aacaagcct gcttgggggg aagggctgtt  62400

gggaatcatg gtgtctgttt tctgcctgtt aagtttgaga tacctgagac atcagggtgc  62460

ggatgttaag taggcatttc cataaacaaa accaaaagtt cagagatgtt ttggctggag  62520

acaaaaatgt gatcattatc accagcggat gagagcacct aagtagaaaa tatatcaaga  62580

gaaaataaga gagcctagga ctgaaccctg atgaacagtt agcattcatt caaggaaagg  62640

ccagagagat gggagaaaaa tgagaagtgt tgcgaagtac agtggggtga agtatgcttc  62700

aagagagaca tgtcaagcat gctggctgca tgcttggcat tcagtgcctg tggatgagaa  62760

aataaaggtg aatgcacagt acacctggtt cttgtcttag cacagcaggt tgttctcttc  62820

ttcagaatat caacttttac ttcttttttct gtcacctgtg ggatgttatt ttgaatgtat  62880

ccttagcatg tagagaagtg atgcctggca cataacaagc atttacttaa atacttgttg  62940
```

```
aatgactgga tgttttttgc actttctttta gagcatttga cttctgttgc tttcatagat   63000

gttcttcact gttctttttat gtgttgtgtt taagggacag gcattagagc ccaaacagga   63060

tgctttccaa ggccaagaag cagcagtaat gatggatcag aaggcaggat tatatggaca   63120

gacatacccca gcacaggggc ctccaatgca aggaggcttt catcttcagg gacaatcacc   63180

atcttttaac tctatgatga atcagatgaa ccagcaaggc aattttcctc tccaaggaat   63240

gcacccacga gccaacatca tgagaccccg gacaaacacc cccaagcaac ttagaatgca   63300

gcttcagcag aggctgcagg gccagcaggt aaccagtcat gtgttcttcc ctctggcttc   63360

tccttctgtt gttttcagac tatgtttctc agtgttctta ccactggtgc aatctatccc   63420

tgtcaactaa agaaattctt tttgtttttac ttctgtgtaa ggttttattt gtacaaatgg   63480

ctccttgtta aggagtagtt ttatgagaat attctatttt acaggtaaaa agtaaaaaaa   63540

tgtcaggaag gattgctctt ggggaagaaa aatgttactt gatgactttg tagtcttaaa   63600

ggtagataag gttttttttg aaaaaaatcc ttactgctaa taaccaaata cttaaacctt   63660

cttgatttca gcattttttaa tggaactctt cttttctagat gttttataaa actagagttg   63720

tcttttaata ttctaaaata tgacttctgt ttaccctatt gttttcttag tccccaagaa   63780

atgttttaaa attcaattgt ttttattgtt tatgtcttca aaccatataa gtagatgaat   63840

gcctgaggtt tttttttttgt ttgtttgttt gttttgtttt gtttttttttt ttttgaggtg   63900

gagtcttgct ctgtcgccca ggctggagtg cagtggcatg atcttggctt actgcaacct   63960

ccaccttctg ggttcaggtg attctcatgc ctcagcctcc cgagtagctg gggagccacg   64020

caagcccggc tagttttttgt attttttagta gagacagggt ttcaccatgt tggccaggcc   64080

cgtcttgaac tcctgacctc aggtgatcct cctgccttga ccttccaaag tgctgggatt   64140

acaggtgtga gccaccgtgt gcggccaaat gcctgagttt ggaatccaaa gagccagaga   64200

ctccattgca taaatattgt taaaagtcag tttaggtact cagaaaagct gtgttactgt   64260

attcattttta ctttctgccg tttcttcact aaaagtcatt tagggaaagc taatggagtt   64320

tattcagaat tcctctgatc aacttaaagg tatttcccca tgtgcccgaa taatcccaga   64380

gaaagcctga ctataaatct tttgagtttc tattgtgtgt gtgtatatat atataaaatt   64440

tatttattta ttattatttt ttctgataca gggtttcagg atggaatgca gtggtgcagt   64500

cacagcccac tgcagcctcg acctcccagg ctcaggtgat cattccacct cagcctccca   64560

ggtagctggg actacaggag tgtgccacca ctcttggcta attttttgta gagatggggt   64620

ttcttcatgt tgcccagact gatctcagac tcttgggctc aagtgatctg cccacctcag   64680
```

```
cctctcaaag tgctgggatt acaggtgtga agatattctt taagctgcaa aattgcactt   64740

tacttttttt tccccagtgc caaacagtag cccatcatat gctagccaaa gacttttcaa   64800

cattgacctt tttgcagtgt gaaagtactg gttcagttta gacgtgactt agccaggtta   64860

ttgtgtttgg agatattacc tcattggctg gtgctgaggg tctggaaagc tgttttggca   64920

gactgacgtg ctctgcttgc attctaacca acttgtctca cctcagtttt tgaatcagag   64980

ccgacaggca cttgaattga aaatggaaaa ccctactgct ggtggtgctg cggtgatgag   65040

gcctatgatg cagccccagg tgagctccca ggtgaggatg ataagcctct ccacatgcat   65100

tgctctgtgc tcaggacagg gcttggcctg tggttggctc tcagtaaatg tttgttaaac   65160

aaatgaaggt aattctgaat ttcttgtgta agaaagcagt cgcattaaag actttcgact   65220

cttccattct tctctctggc tggtgactgg gaggaatcag aggagggaga gctttcttca   65280

ttaaaaccat cgattagtgt ttttttaatt ggttcccttt gtgatcagtt gctgtactgt   65340

gagaacagct atcacttggc tgtttaggaa tttaataaat ctgtaaatgt tcctctgttc   65400

ctggattatg aaacaacatg cacactgggt aaaattctga aattataaag aagaaaataa   65460

agaatacata atcctgttct cagtgatagc ctctgagatg acctgtttct tgtagtagga   65520

ggggatatta aaattccctt ctacttccag ccagtggtgg agacagtatt gaggggtttt   65580

tttaatgtgc atgaggcaga tgaccacaca gcaatcctct attgtgattt gaaatatcgt   65640

ttataattgt tttttaaaaa gcaactgtga aatgctcgat ttttattgtc ttatgcctac   65700

ttggaagtac tgatatttac attttcttga taataaaaca tcttgtggaa gctgagctag   65760

aatgtcctac agaaagatga taaaagcttg cttttttggag atgacccgta gctagtagag   65820

ctgaaatcag cttccttgtt gtacttcagt tatgtcacct tctgaacctc cagatagctt   65880

ctgcttgccc cttacctctt tctgaaagtt taaagaaagt tcaagatttt ctgaggtgga   65940

cccctgctta tctgagtata accccatctt attttttttg gcttcatgtt tcagccctcc   66000

accaccccaa cacactgaat cctcattttc ctgtaattgt ctttcatagt tcctgaaaaa   66060

tttgtcctca gattccaccc ctaaatgttt tcttactttg tggaatgttt ctagtcatgt   66120

taaagcttga cagtgtgttg tcttttgtct tttaaccccca aataattttc aggtccctct   66180

tcttcagttc tccctccctc cccttgcaat agccagaaag cttttttttt tttttttttga   66240

gagtcactgt tgcccaggct ggagtacagt ggcacgatct cggctcactg cagcgtcaat   66300

tccctgggtt taagggattt tcctgcctca gcctcctgag tagctgggat tacaggtgct   66360
```

```
catcaccaag gctggctagt tttggtattt ttagtagaga cagggtttca ccattttggc   66420

caggctggtc tcgaactcct gacctcaagt gatccgccca ccttggcctc ccaaagtgct   66480

gggattacag gcgtaagcca ctgcaccagg tcagaaagct tttatgtgaa gaattgtatg   66540

ttttggccgg cacagtggct cacacctgta atttaagcac ttcgggaggc cgaggtgggc   66600

ggatcacctg aggttaggag tttgagacca gcctggctaa catggtgaag cactatctct   66660

actaaaaata caaaaattag ccagagtggt ggtgcacgcc tgtaatccca gctacttggg   66720

aggctgaggc agaagactca cttgaacctg ggagacgaag gttgctgtga ggcgagattg   66780

tgccactgcg ctccagcctg ggcgacagag tgagaccctg ttaaaaaaaa gaaggccctg   66840

ggtgttttct gtcttatacc tggtgtattg tgggggtact atatgtatgc aactggcagg   66900

ttcttgctat atatatgtaa ttgcactctt tcttgggtat tagcagggtt ttcttaatgc   66960

tcaaatggtc gcccaacgca gcagagagct gctaagtcat cacttccgac aacagagggt   67020

ggctatgatg atgcagcagc agcagcagca gcaacagcag cagcagcagc agcagcagca   67080

gcaacagcaa cagcaacagc aacagcagca acagcagcaa acccaggcct tcagcccacc   67140

tcctaatgtg actgcttccc ccagcatgga tgggcttttg gcaggaccca caatgccaca   67200

agctcctccg caacagtttc catatcaacc aaattatggt aaatctgaca atgaaaatgt   67260

gccttcccca agttaacatt actaaggaca taagcttcat tacatttatt gcacatgaaa   67320

gacaaaaaca cgattcactc cctctttact tcacaaggaa aaccaaatta atttaaatga   67380

ttggaaaaca aaaatgctgc agcacacagg taattgagac aggtgtatcc tgtcatagtt   67440

gaatattttt ttcagtccca ctcattaaga gtccccaaac tctggaagaa acactgcaaa   67500

gttgtcccct tgccccttct tgtatgttcc agtatagtag aactctctaa tctctgaatg   67560

cttggtcaag tcagtgagag gaatgcactt tgtgggcttt taagttgatt ttcttggtga   67620

cttggattta ttatttttttt tttgagatgg gggtcttgct ctgtcaccca ggttggagtg   67680

cagtggtgcg atcttggctc actgcaacct ctgcctcccg ggttcaagtg attctcctgc   67740

ctcagccctg agtagctggg actacaggtg cattccacca cccccggctg tttttttttt   67800

taaattttta atagagacgg ggtttcactg tgttagccag gatggtctcg atctcctgac   67860

ctcgtgatct gcctgcatcg gcctcccaaa gtgctgggat tacaggcgtg agtcaccgtg   67920

cccggccctg gatttattat tacagtgatg cagatacctc ttcatttcag cctttgagag   67980

gttccaggaa catggtggga ataaaggtgt ctattgggga gccctgtcat ctgaggatta   68040

taactcccct gccctttaaa gaaggatgga gtgatgtgag ttgagtgata cggagtccct   68100
```

```
tttctacagg aaacccatta aagcaactga tctttcagtg atccagatgg tgctcctttc  68160

tgtagtaagc ctgttactct agtcgtcatc ttggtgagaa tctagaatac ctggggggc   68220

agcatcttat agcactctgt atcttacact tatcacttcc ctccacccc  acctccttta  68280

aaaaaaaaac aaaattacta cagaaatctg atattctaag gagaaggcat ttgggcattt  68340

ttatttcttc tgttttatt  ttgtaaggaa tgggacaaca accagatcca gcctttggtc  68400

gagtgtctag tcctcccaat gcaatgatgt cgtcaagaat gggtccctcc cagaatccca  68460

tgatgcaaca cccgcaggct gcatccatct atcagtcctc agaaatgaag ggctggccat  68520

caggaaattt ggccaggaac aggtaaagaa cagtgactta taaagttagt cacatcctag  68580

tcccagaagt ccaagaactt aatgtatttt tcagtcaagc cttttttggat ggagaggttg  68640

aaaggactgg gttcatatta gaaggtgtga tttggcttgt ccattttgag agtccttcaa  68700

gcacgcacat atctattagg gtgtctagta cagaaagctg tgaaaaatgg atcacaggct  68760

gtcagggagt tttctctaac attcccagct taagtatagc aatgtttgac acaattgtag  68820

taatttctgt gggcatgccc tttgtcgcta aagtgacttc cagaggtaat attaccattt  68880

gtttacttac agctccttt  cccagcagca gtttgcccac caggggaatc ctgcagtgta  68940

tagtatggtg cacatgaatg gcagcagtgg tcacatggga cagatgaaca tgaaccccat  69000

gcccatgtct ggcatgccta tgggtcctga tcaggtatgg gatcgattcc ttaccttttt  69060

caaaaagttt ttcttgttct ctggatagaa ctaaagccta ggctataatc agaatgtcct  69120

aggtatattt taacttgaat gtataactta aaatatagta attgaaaaaa cttggtttga  69180

aggcattggg ccattagata cttttggtaa gccagagctg cattgtaaga tgggatctca  69240

ggaacctgaa tcactcagcc agagctgcac tgtaagccat gaatgtggac atgggtattt  69300

ttttgttgtg caaagcatgt gtttttactca tttttttttt tttttttttt ttcctggttg  69360

ctgacagaaa tactgctgac atctctgcac caggacctct taaggaaacc actgtacaaa  69420

tgacactgca ctaggattat tgggaaggaa tcattgttcc aggcatccat cttggaagaa  69480

aggaccagct ttgagctcca tcaagggtat tttaagtgat gtcatttgag caggactgga  69540

ttttaagccg aagggcaata tctacgtgtt tttcccccct ccttctgctg tgtatcatgg  69600

tgttcaaaac agaaatgttt tttggcattc cacctcctag ggatataatt ctggagacat  69660

ggagtgttac tgatcataaa acttttgtgt cactttttt  tgccttgcta gccaaaatct  69720

cttaaataca cgtaggtggg ccagagaaca ttggaagaat caagagagat tagaatatct  69780
```

```
ggtttctcta gttgcagtat tggacaaaga gcatagtccc agccttcagg tgtagtagtt   69840

ctgtgttgac cctttgtcca gtggaattgg tgattctgaa ttgtccttta ctaatggtgt   69900

tgagttgctc tgtccctatt atttgcccta ggctttctcc taatgaaggt tttcatttgc   69960

cattcatgtc ctgtaatact tcacctccag gaactgtcat ggatgtccaa atggctttgc   70020

agaaaggaaa tgagatgaca gtatttaatc gcagcagtag caaacttttc acatgctaat   70080

gtgcagctga gtgcacttta tttaaaaaga atggataaat gcaatattct tgaggtcttg   70140

agggaatagt gaaacacatt cctggttttt gcctacactt acgtgttaga caagaactat   70200

gatttttttt tttaaagtac tggtgtcacc ctttgcctat atggtagagc aataatgctt   70260

tttaaaaata aacttctgaa aacccaaggc caggtactgc attctgaatc agaatctcgc   70320

agtgtttctg tgaatagatt tttttgtaaa tatgaccttt aagatattgt attatgtaaa   70380

atatgtatat accttttttt gtaggtcaca acaactcatt tttacagagt ttgtgaagct   70440

aaatatttaa cattgttgat ttcagtaagc tgtgtggtga ggctaccagt ggaagagaca   70500

tcccttgact tttgtggcct ggggggaggg tagtgctcca cagcttttcc ttccccaccc   70560

cccagcctta gatgcctcgc tcttttcaat ctcttaatct aaatgctttt taaagagatt   70620

atttgtttag atgtaggcat tttaattttt taaaaattcc tctaccagaa ctaagcactt   70680

tgttaatttg gggggaaaga atagatatgg ggaaataaac ttaaaaaaaa atcaggaatt   70740

taaaaaaacg agcaatttga agagaatctt ttggatttta agcagtccga aataatagca   70800

attcatgggc tgtgtgtgtg tgtgtatgtg tgtgtgtgtg tgtgtatgtt taattatgtt   70860

acctttttcat cccctttagg agcgtttttca gattttggtt gctaagacct gaatcccata   70920

ttgagatctc gagtagaatc cttggtgtgg tttctggtgt ctgctcagct gtcccctcat   70980

tctactaatg tgatgctttc attatgtccc tgtggattag aatagtgtca gttatttctt   71040

aagtaactca gtacccagaa cagccagttt tactgtgatt cagagccaca gtctaactga   71100

gcacctttta aacccctccc tcttctgccc cctaccactt ttctgctgtt gcctctcttt   71160

gacacctgtt ttagtcagtt gggaggaagg gaaaaatcaa gtttaattcc ctttatctgg   71220

gttaattcat ttggttcaaa tagttgacgg aattgggttt ctgaatgtct gtgaatttca   71280

gaggtctctg ctagccttgg tatcattttc tagcaataac tgagagccag ttaattttaa   71340

gaatttcaca catttagcca atctttctag atgtctctga aggtaagatc atttaatatc   71400

tttgatatgc ttacgagtaa gtgaatcctg attatttcca gacccaccac cagagtggat   71460

cttattttca aagcagtata gacaattatg agtttgccct ctttcccctа ccaagttcaa   71520
```

```
aatatatcta agaaagattg taaatccgaa aacttccatt gtagtggcct gtgctttca    71580

gatagtatac tctcctgttt ggagacagag gaagaaccag gtcagtctgt ctctttca     71640

gctcaattgt atctgaccct tctttaagtt atgtgtgtgg ggagaaatag aatggtgctc   71700

ttatctttct tgactttaaa aaaattatta aaaacaaaaa aaaaataaat tttttgcaa    71760

tcctttcctc agacctggct ccaggctaac tggaaggcag cactcccttt tttatatagt   71820

agaaaaatga agtttattat aagttttat attttctact tgttcatttg gtgcaaactc    71880

aagatttctt ttaataggtg cagtctttga gataatttgt ttttacctgt attgcccttt   71940

atctttttta ggtaattctt tgtactcctg ctgtctacct ctcctcacac cccagcaccc   72000

cccatttttt caaaccttgg tatctgttgg gtgaacagta taatctttc atctgctttt    72060

agaatgtggg atatttccag tacctacttt ttttttttt ttttgctgaa tccaaagata    72120

tataaataaa atatatatat tttataaaga tcagaatgat ataaaggaga tacatgtttc   72180

ttcctttaaa aaataaacgg aagttacatt gttaatgttc atattatgat gccacttttc   72240

taaactgcat ctggattgaa aggtgtaaat atcaataaca gtgctactta gttatcagta   72300

tttaatatct gaggtgagtt gggggtatct atattagggg tagggtatta cagaagataa   72360

ttggcttgat gtcctagaag ttctttgatc cagaggtggg tgcagctgaa agtaaacaga   72420

atggattgcc agttacatgt atgcctgccc agttcccttt ttatttgcag aagctgtgag   72480

ttttgttcac aattaggttc ctaggagcaa aacctcaagg attgatttat tgttttcaac   72540

tccaaggcac actgttaata aacgagcagg gtgttttctc tcttcctttc taatatatgg   72600

agtttcgaag aataaaatat gagagcaata tttaaattct caggaattga cttatactct   72660

tgagaatgaa ttcagtttca atcaagttta cattatgttg cttaaaaaaa tagaaattat   72720

tctttatctt gcaaagaatt gaaaccacat gaaatgactt atgggggatg gtgagctgtg   72780

actgctttgc tgaccatttt ggatgtcatt gtaaataaag gtttctattt aaaattggag   72840

cctaaagagt tttttttttt ttttttttt tttaaatccc tgttgggtta agggtaaagg    72900

aggttaagga agcctatttc aaataatggt aacagtttct gagaagttaa aaaacgccac   72960

tagggagttg ctagggagcc ttggcctgtt tggggcattg aaacaaatgt gggtgctttt   73020

agggattatc tccgtcatct gttaaatgag aaatgggttg gactggtgat tgatagttga   73080

aatctgtcaa ctacttgtat caggttagac tacctgatac acaaagaagg gttggccaag   73140

gcgaatttct ttgcaattga ttaatacttt tttaaaaaat gaagtaccaa agctggtata   73200
```

53

```
ctatgagact tacctgtagt cccttgaagt atggtagact ttttagtcaa tctacaacca  73260

tctactcccc ttttaagaaa atcttctaaa cccaaggcat tttcttccaa aaagatgttg  73320

actggtagta tcttgaatac tttaaaaaaa cagacacacc aaaaaactcc caagaaatgg  73380

cctttтacaa aatgtcaaag gttcttcata ccaactgctg gtcattggct ggggttttga  73440

acactgtatg acaatactta aactacaaaa ttttttttac aaatacagtt tcatcaaaac  73500

ttgggacata catcaacttc atttcttttc agtaccttaa aaaaaaaaca tcagttctgg  73560

gacataacaa agaaatacta ggagaaatgg tatctggaca ggaacagaaa tgtccacaac  73620

tgcgagggat tttcttttac actggccaca gagcgtttat tgacaccacc actcctgaaa  73680

attgggattt cttattaggt tcccctaaaa gttcccatgt tgattacatg taaatagtca  73740

catatataca atgaaggcag tttcttcaga ggcaaccagg gtttatagtg ctaggtaaat  73800

gtcatctctt ttgtgctact gactcattgt caaacgtctc tgcactgttt tcagcctctc  73860

cacgttgcct ctgtcctgct tcttagttcc ttctttgtga caaaccaaaa gaataagagg  73920

atttagaaca ggactgcttt tcccctatga tttaaaaatt ccaatgactt tcgcccttgg  73980

gagaaatttc caaggaaatc tctctcgctc gctctctccg ttttcctttg tgagcttctg  74040

ggggagggtt agtggtgact ttttgatacg aaaaaatgca ttttgtgcag ctggtgaggt  74100

ataatccaaa gcaaaagcag gggcaaaaat ggacttcctg aagttatctc tgctcctgct  74160

ggttatcctc cagaatctgt catgttgact gagagtgcgt gcttgctttc tcaggcctcc  74220

tggccaatac cacaggtctg ctggaaatca cccacatggt ttttcattgc ctgtgcagtc  74280

aggtgatgcc tctatgtttt tggaggtcca cctctgttgt ttcttaacct tcccagcctt  74340

cccacagttg tcccctaaag aacaaaacaa actcatctta gcacttagct atcatggtct  74400

ttatcatgac ttcctaatcg gtcctatagc tgaggaagct ttgcttcaag gctgctgaga  74460

atgaatattt ctaggttact tagaacggga ttgccaccac ctagtcacct caatttttttg  74520

tttacttata cacccaatgc ctggcaagga tggcatttaa ggatctggac agaatagtgg  74580

ctaaggagat tgtgatatgt aaagattctg taccttaatt ctagaagcac cgaagaaagg  74640

cttaggtgac ctgttactaa tgtcctatta aagccacaca ggtttatatg catataaagg  74700

aagaaatgag tagaccagag gttgcaagtg gcagttcacc aagggcgata atttgcccac  74760

atggttaact taatgtcaaa ttagatgata atgataaaga attctcacac atacttgcat  74820

ttttggattt ggtagacgaa tgagaaaatc tggcgaacct cagcccattc ctgcagggag  74880

caaactggcc tgctcccttt agaatagagg tgaactttac aggttgccag tctcttagtc  74940
```

```
cctgtcagcc tccaatggca ctggagtgag agtttgtagc atgggctttt tggaaaccat   75000

ttaatgaggc catcctacta ctgatgttgt atatcagtta gcacttttgt agccacagcc   75060

ttcaagatgc ctagcaattt gtaatattta aatgcttctc aacctctaag taatagctca   75120

agtttaccaa gcacagatta tagcgagaac agcagtgtac tggacaaggc attaatctaa   75180

aacatgaaat ggattcaagt gttttcttag ggaaagatgt gcattagtac ttcccccccca  75240

ccctcatcat gagaacaaac aaagggtggt atgtaagaaa tggcatgcaa atagaatagc   75300

attggcaaaa tgaagcggtc agaaccagat ttctatttgt aagctggttc ctcaactcac   75360

agtgatttgg aagaaggtct cttcatttct ggccactttc gacgctgaaa ctgcctaagt   75420

tttcaagtgt caaaggagaa tgaatgttaa ccatcaccaa gaaagaaaaa gtccccaaag   75480

aactatacaa agaaggtctc ctaggtgaca cctatctttg gtgggtgatc ctggtctcgg   75540

gcagaccaga gggaagggca gtttctcaag ataacaggtg cagactcaca gagatgagac   75600

tgaaggatgg gccaagatag gagaactttg tttaggcttt aataataaaa cgaaatacct   75660

gtattgctca tagcttcctc catctttaag tcctaaatga aggagaaatg aaaaacaaaa   75720

caggagcaga tagtttaggc aaaacaaccc caacacacca gaaaaccatc ttatgctttt   75780

ttgtcacaat cccatgatgc tgatagtgtt ccctactcag agtagactga attatgaggg   75840

gtagactgaa ttatgagggg aacctgccct aagtctccta gatagccttg tagattgcct   75900

aaaatccagt gtcaccatga tcagtttcag gaccctgatg gcttcattca gcgctgacct   75960

tagttatggt gagggaggta gatgcaggca tgaacatctg tgctccagag gacagaaagc   76020

caagagccct gaccaagtgc aggaggagt tccccttgg gctctgggga agttttcccg   76080

aggatgtggc aggatcaagt gcgtgggctc cggggtcagc ccaccttgtt caccttactc   76140

ctccataaaa tgaggataag attcacctca aagcttatca gctaacacat gtaaaatgct   76200

cagcacagag cctggcacac agtgactaat atgtcattgc actttgatca caagagtagc   76260

agcacttgag tggcagagat taggaagcta ctagtgaaaa ttctgatcat atcaggctcc   76320

tgaccagaag tattagtgca acatcttgtg taaacacatt agctcttccc tcttcataac   76380

tagagccgac ggtagcgtct gaattcctcc taagctgtgt agccattttc ctgacatgaa   76440

ctctaggcat cctcctagac acagtccctt ccccaaggga ccttaaatac caaaggtttt   76500

ttttaggcca ctctctctca ctagtaagtg aacttcattt ttcttttagc tttgtttct   76560

tttttaata tatttttttt atttttagag atggggcgac agctctgtct cccaggctgg   76620
```

```
agtgcagtgg tgctatcata gctcactgta accttgaact cctgggctca agtctcctcc   76680

cacctcagcc ttccaaagcc ctggaatcat aggcatgagc aaccatgcct gtttagcttt   76740

tttcatctta aaatatctat ctggttggca ttctaaactt aaaactgcag attttgtcct   76800

gtcccaaaca aaactcagga tttacctggg actcctaatc ccgcacctcc catcaccatg   76860

ttgtctgggg gcttcaccac ctgaatctga aatccatcat ctttactgct cccacctcta   76920

gtccaagcca ccaccatttc tccctggata actgggccat cttcgctgtt ttctcccata   76980

aagtcccatt ctccacctag caaatgtcgg tgcccaggtt aaaaccctcc attggcttcc   77040

tgatacacca caaatgaaat ctaaactcta ccgtggccta ggaagcccca cacagggtgg   77100

cccgatgccc tcccgccact ctccactggc ctcagttgtg ttggctgcac cccctgagct   77160

gctttctgct cctcacactt taagcttcct ggagcgccag ccctccacgt tttctcagtg   77220

gtcgattgca tcctactttt caggactcag ttcagaggtc tgaccctggt tttatttagc   77280

agtgcccttc cccagtcaca ctggattcta ccatccagtt ttaccctttc catacaagca   77340

agaggcctcc tgctgtggac tgctcttctt aggacaacac tggctccaca caagtcagcg   77400

aggatggggt catctttagt caacatggtt tcaggtgtaa gttctcagga agtgtttgtt   77460

gaatgcatga gtggacaaaa gggaggacaa tgaaatgaga cggaattccg tgtgtttcct   77520

gggcagttgg tgcaggtgtt cctctctcag gaatcacagc ttgttaaagg tcatctgcct   77580

gctatggaca ggggctccca tgactcgtct ggaactgtat cacctcccaa agcctggtga   77640

tttcaggctc attcttgggg tagacaccac ctcctgagtc ccttcctttg gttaccctgc   77700

tgtccaaggg ccccacgttg gggtgcctac tcacccaggt ccatgtttcg agtccggggg   77760

ttacactgct tgtaaccctt gcagctcctc agctccatga gctgtacgtg tagctggttg   77820

aggacatccc tgtccagtgt gttcactgca ttcatcagct ggttgcaaaa aaggtagtct   77880

gtcaacaagg taagtacagg gactctcgcc ctgcccttct accaaccagg ggacatattt   77940

caggcaggtg gcgggtggaa ggtgctaggg gctggtgacc tgtttactcc aacttctgca   78000

agagccagcg tttggaagag ttaggtgact tttttggcttc aagtcccacc aggttcactc   78060

ttcatgagag tgaaaactca ggagaataaa aaccacgtct gtgtatttaa cgttggagtt   78120

ctgcagccac tggtcaggaa acttcccaag cttggaaaga aagccttcca agtcttggtt   78180

ttatcagcag ccttcattca ggggccctca gctcctcctg attgcaaagc agccatttga   78240

tgaaaggacg ggtaagtggc ctgggttctt gtgtagtctg ggagctaccg gtgagggact   78300

taacctaccc ctttggtaaa gtatgagggt gaacctatct aaggagaaag actgcacacc   78360
```

```
tatatagtaa ttaaagcatt tgtgctgctg acatttaaac atcagatttc atttaaatta   78420

tttcaggctt ttcttgaaag gtcaaagcct gggcaatacc aaggccacag tacaggaaag   78480

ctctagtgct ggagctcagt agtgactgtc cctgtacaag ggcccacatg ttccgatgac   78540

cagacatgcc actgctcctt ttggtcttgt gtggtcctgg gccacttcag tcgcatgtgt   78600

gtttagatgg cttactgtac ggaagcactt agcagagtgc ttggtgcagt gtgttactgt   78660

tatattagct gcgcggtccg tgtaggccct gcagtgggtg atatttggct tgatcctaca   78720

gcctgacagt gttaggagtc ttcacaagtt ccggcaaaac ctggttgcat gctgcatgtt   78780

aagttagagg gaagaagcca tatatattac acacgcaggg tgatggaggc aaaaagcagg   78840

gtgatggagg caaaaaaggc tgattgaaca cagaaccccc aatctcagca gcttcacaac   78900

ttactcccac cggctcaggg actcagtggg acttggacaa tttgtcatca cttccctgag   78960

gttggggggg gcctacctgg cagcactggt gtaccccaca cccccatccc tctagctcgg   79020

gttgcctgta cctggtaggg gtctgtgttg agatcaaagt actctaggaa gccagttgca   79080

aattcacaga agaggaaatt gtgagtctca ttgatggtcc tcatgcacca gtacgtgtta   79140

ttgttggcgc tggtgcaggc acagaaaggc cccactgcca aggaagagag agcatgtcct   79200

gagtgcctgc gggaggaggc cccatctgcc aacagtgatt cctgtcaggg acagcccta   79260

aaaccagttc gtcaaatgcc aagaggctgt cccgagcacc gtggacccct ggtgttgggg   79320

accccctttc tgagagaggt ctgggtcact aagtggagaa gtttcttgaa cccctgggcc   79380

tcagcctgtc cacccctgcc ctgggcttgc tcacgtgtcc agaaaggcgc cgtctgccag   79440

tgctggttgt cgtgggtgaa gcacgtgagg cctggcatgc tgcacgtgtc gttgttctgc   79500

aggcgcttga gcagcttgcg gagtttcttc ttgcgcttct gctcccgcaa cagccacacc   79560

ttgtccttct cttgcaggcc cttcctatgg gcgcagaggg ccacacacac cttgggcctc   79620

tgagggatca gtgaccccat gtctctgctc ttcctgtcca cctaagggct tcgctgaggc   79680

ttctccaaca gagagccatg ggcatagcaa ttcagggtcc caagtcccag tgctgctcca   79740

aggcagagcc gggaccagaa cctgggtctt gtcattctac tttaactccc aaggggcac   79800

aagctgggga cagaaccagg cagctactgg gactcctgtt gacaccccctt tcccctcctt   79860

cctgtgtcct gccctgcttg gtggagttgc ggtaacccca tttagccaca aggggggcgtc   79920

ggaggcccgc tcagtgttga ttgggaagta aggcctcttc gagggctacc gtggacttcc   79980

cagggaaggg cctggacttc tttccttttc ttctgagttt tagcttaagg gagggccacc   80040
```

```
tcctcatgca ggcctctgca tctcttcccc aggacctcaa gctgctctta cctgaaagga   80100

tgcagactgg agcctctgtg cttgaggcgg cctttgtgct gggtgtggta gctgtaacag   80160

acccccccag ccccaggctt caggagtggc tcagagggct ccgctggcag gtgcaagctg   80220

tgatttctgg gactcccatg tgttgctgct gccccacccc tgtccctcct tctggggtgg   80280

tggtgggtag ggcatgaccc tatcctcagg gcagcaggtg cctgcctgag tggcttcttt   80340

ctccaagcat gagccaggac tctgcctgga cttttgctag actttagcag gttgggttaa   80400

ttgtaattta gccacgacta gaagctgggc ctggctttag gtgcatcagc ctcagcatcc   80460

tttttccttt cttttttgat ggttaatttt acatgtcaaa gcctcagcat cttgaggttg   80520

gttccctcac caccctgcct actcacactt ggtcggggtc aacacaggga agcctgtgtt   80580

ttgcaacact ttctggaaag acagcagggc ttctacagct gtgctgtcca gtatggtagc   80640

cactggccac aggtggctac ttcaatttga attaagcaaa ataaaaaatt tggctcctta   80700

gtgacactag ccaaaatttt aagtatgcac cagccacgtg tggtgtagtg cagatatagc   80760

ccatttccgt cagcacagaa tgttctatta gagctgttct agagttcagt cctttgggcc   80820

aggggacccc taagccggga acatggacct caaaccacat gggggatttc tgaaagggca   80880

atcggcagag gcacttttcc ggcctggagc cggctctgcg cagccagcac gggtctcttg   80940

ctagcagtac tggaatctgg gcgccagcct ggctgaggag caggtccgtg tgccacactg   81000

gctgacaaca gggaggtaaa ttacggattt ttttaatgcc atgaggggag aagataaaga   81060

taaaaataaa aaatgaaagg ggtcaatcac gagaggggat gaactgaact gtcctgtagg   81120

agagtggggt cttagggagg tcccttttgct actgcctcac ctgattttgt gacagtcaca   81180

ttcttctggc cgcttttttct tcaggtgacc tcggacttcc ctcaggttct taattttgtt   81240

ctgcagggtt tcaatctgag ggaggggcag aagaggaggc cttgaaacct tcaaggctgg   81300

acaacaaaga cttggcctgg tgactgcccc cacgctgccg tgtctgtgct cagcagcggc   81360

agcctgcact ccccgggccc caggggcaagc accggcatgt ctgggtgggg aggaggtact   81420

tgttctgcct gaaggaagcc cgccttctcc tccagccagc ccttgcaagg gaaccgagtc   81480

attttttccgg cctggcctgc gcaggaaccc gctgagccca ctgaggcctc cagtgtctcc   81540

cctgggtttg atgaaaggcc tcctgtagcg tagacttctt gtaagtcaaa aggggggacaa   81600

cgtggctaag ccatcgtccc tcagacggcc tgggcaggaa gctatctgtc tcatgctggg   81660

actgacacct atccccgcgt tgaggaatct gtggggacct cacttcacct ctccagcctc   81720

ttccctgggt ctggcctcac tgccctccca ctgtgaaccg ggggtcctgc caggcccgtg   81780
```

58

```
gtggccgaga gcatgctcct ctcccgctct ccactcacct cgtggtcgat gtgcagcttg   81840

tggtctttcc aggcctgcag ggacttgtac aggtccaggt cacactggac tgtgtcgttc   81900

tctaggatgt agcacctgct tgagagaagg gatcacgtgt ggctcggagg tggtggaggg   81960

ggagcagccc aggtgcccaa gaggtgtggg aagcccttgc cgaggtctgt cctgtcccct   82020

tcaccctcga cttccacctg gacactcacc gatgtgtcac tttaatgggg ttggcggctg   82080

aatagtcggg aaggcctcca gtgccactga agtccccacc atccttgtca tcttggtcct   82140

caggggccca agaggtgtgg gaagcccttt gccgaggtct gtcctgtccc cttcaccctc   82200

gacttccacc tggacactca ccgatgtgtc actttaatgg ggttggcggc tgagtagtcg   82260

ggaaggcctc cagtgccact gaagtcccca ccatccttgt catcttggtc ctcaggggcc   82320

cctggccagt gccgcttggt gaggtttcgg ggctgggcgg catcacccag gcctacgtgg   82380

tacaccctgc cgtccacctc gatggccact gagcggatgg agcgactgcg gacatagctg   82440

gccttgtact ctgtgggcat tagaggagtg gcagagttag ggaggcagga aaggctggcc   82500

aggctcccag ggcagtgggt ccttcatcaa gatagggccg ggcttccaag catgaggctc   82560

agctttgcct gcgactcgag gggtcgtgga atctacccgc ctgctcgcag atcctggacc   82620

gcaggggagg gcctcgaggt gatcacaccg gcaagacgga agtcctggag ccaagaagcc   82680

actgactcaa gaggatttca agcgagagct gcttgcgggt aaacaaatgg cggtacatca   82740

tctgtacaac ggaatatgcg accagaacca ggagcgaggt tctgattcac gctagagcgt   82800

ggatgaatgt caaaagcagg cggagtgaaa ccagccagac acaaagcggg ctcgtattgt   82860

tacattctat ttataggaac tacccagaat aggtaaatct atagcggcag aaagaagatt   82920

ggtgattgcc aggggctggg ggagagggta gtgaggagtg actgctttgt gggtacgggg   82980

ttcccttttg gggtgatgaa atgttttgga actaggtaga ggtgtgcaac actgtgaacc   83040

tattaaatgc ctctgcattg tatataattg taaaaatggt gagtttgatg ttatctgaac   83100

ttcacctcaa ttaaaaagga aaaaaagtat catggatgta aaaatgttga tttaaactgg   83160

gaaaaagggg ccctgcagtg cctgtctctg ggtagaaatg gacggggact ggggaagcca   83220

cttagcttct ttgagtccca gagagctgga ggctgcccac caggtggtag gcaggtgcta   83280

cacccaggtg ggccggcaac aaggctgagg ggggcttttg catacgccct gacgctgaaa   83340

actcaggggt gcaggctgaa gtgacacccc aggtagcctg tatcttctat gtctcaaaaa   83400

caaatctgag ttggtaacat taaagaaaaa ggggaggtgg tggcggtgat gtagggatcc   83460
```

```
agatttccag cttccagaaa ggaaacagat gtctcacggg cccacagttc catatggtca   83520

ggacgggccg gggatgggcg gcccctttgg ctgcccactg tcttccctgt tggccacagc   83580

ccccgccact ccttcctgtt ttaaaacctc tgcccacctg acacatgtct ggccccagca   83640

ggcacgcact gcagttgtca tccttctcca gatgtgcctc atttaaagag aagggcctgg   83700

agccagttag tgacccaggt tttgttggat cccaagtgac cccgagatgg tgaccaaaga   83760

ggaccagctg gaggcaggtg gtggcggaag gcagtggaag gagggaggaa agggctccct   83820

tctcacgtgg cccgggtgcc accccccactc ttgggggatg ttttgtatct ttcagttctc   83880

agacaccttg catcagagtc acaagggccg aaggatcctg aggggccggg aaaggcctcc   83940

cctctccagc agagccttgg gccttttctg acacagggca gccttctcct gggcacttct   84000

ctccctcggt ttagtctccc gatgcaagta cacaaattgc cgaggatggt ccctgtgcca   84060

agcaggtcct gccccgagag gctcaggaaa tagacccagc gtgtcctctc cactcctttt   84120

gtctcagtcg gctcataagt gagctgcttt gcctctttcc accctccatc tcccagctct   84180

agattcaggg gtccctaaac catggcctaa gggcccaggc cagcctccat ctgtctttgt   84240

gaatacagtt tcactgggta cagctgctcg cattcccttа tacctctgca gtcgcagggc   84300

tgagttgcaa agcccaagac ctttactctc tggctcttca cagaagcggt atgccagccc   84360

tgtgtgaatc cttttcctgga ctgaagccac actacctgct ctccccatca ctctgtgttc   84420

atgtccagag tcctggaggt acccttcctg ccacaccaac agggaatggg acaggacttc   84480

ataacccggc ggccaagagc tttgactctg caatcagatg gctcaggtgc aaacccctga   84540

gcacatgtgt ggccccggcg atttgggtaa cttctcagga tggtgcctac cctacaaagg   84600

ctccttggag gatggcacga aacggaacta gtgaagcatt catgcctgat gagctggtgt   84660

ggaccagcta ctgcaggggg tggggactct gcctgcagct gacgtcctca cctaaggtga   84720

caaccctggg cccactccct gcctctccac gccggtgacc gcctgtgtga tgtggctgcc   84780

catgcccatg gtgcttctca ccaccctcgg ccacaccggt cacctctctg tgactgggac   84840

tcaccgccct gattctgagc acagggtctt tgtactccat cttcctcctc ctcagaacac   84900

ttgctctctg gctggtcaca agacctgctc ctttctgtac tttgttctca ttaaatgtcc .  84960

attgagcgcc attctggagc cgccacccct ctctgctagt cccgccaccg ctgcgtctcc   85020

ttcatgcgtt tttcaccagc ggaagtggcc ctttgttcac ttgttcacat cttgtttcat   85080

ccatgaggtc caagtccgtg tctctccagg tcaactctaa tctcagtgtc ttgcacaaag   85140

ttcaagaaat gaatgaaccc cagtcagctg ggcccatccc ccgagtcctc gtccccttct   85200
```

```
cctgttcctg ggtcccccctt ctgctgtgag ctggctggct ctgcctaacc tccccacgcc   85260

acagccagga tccccgtgga tcaaggtggg ccagggcttc ccaaccttac cactgcggac   85320

actttggggt cagatcaaac tctgtggtgg gggccgtcct gtgcgttgca agatgttttg   85380

ccgcatccat agcctctgct cactagacgc cagcagcacc cctccatcac acacaattgt   85440

gacagccaaa actgtctcca aacattgcca agtgtccct ggggacaga aagcccccag   85500

ttcagcctgc tctaggctga ctgctcagaa aagagggaca gagtgtcttg tcggagactc   85560

tagcaggggg aagaatgcca ggcaggagat ggggctggag tccccaaatc agccacgtga   85620

cccagtcttt cctgtccatc atcccctgat gatcacccct gccctgctca cagggctgtt   85680

gagaggtgca ggtcccggct ctgacattac actcacatga ggattctgac cagggctgag   85740

ctgactctca gctactttta ggtatttttc tttcctctaa gcattaataa ggggaaaaga   85800

gctgaatttc tccctgccag atcttgtatt atttaaagat tatcgactgt gccacatatt   85860

gaagcaagga gatgctggct gtgtaatcca atctggaaac caatcattct gttcagctag   85920

aaaagttaat gtagtagttc ctaatcagct ggtgaggaaa tgtaacggag ggtcatcagc   85980

tgggaaacgg tgtttcaggc agtggctggg ctgttatgga gagagactta tctgctccac   86040

gatgaagaca tttgctgcct ggctggctgg accagaggag atcactgcgc ctgccgtcag   86100

agacctcaat ctctaactag tctgtggtac aatatcatcc gtcttataaa gaatggagac   86160

ttttttgtttt ttttgagaca gtcttgctct gtcacccagg ctggagtgaa gtggcatgat   86220

ctcagttcac tgcaacctcc cgctcccagg ttcaagccat tctagtgcct cagcctcctg   86280

agtagcaggg actacaggcg cccaccacca tgcctggcta attttttgtat ttttagtaga   86340

cacgggtttc accttgttgg ccagactggt ctcgaacttc tgagctcagg caatccgcct   86400

gccttggcct cccgaaatgc tgggattaca ggcgtgagcc actgtgcccg atc          86453
```

```
<210>  6
<211>  4397
<212>  DNA
<213>  Homo sapiens

<400>  6
gagcgagagt gtgtcgagtg agtgtgcgtc tgtgtgtccc ggcgagggtg cgcgctcggc     60

gccgggagcg cggccagccg agtccggagg catcgggagg tcgagagccg ccgggacccc    120

agctctgcgt tcactgcccc gtccggagct ggacttcggg gccggggccg gggccgtgcg    180

ccggggacag gcagggccgg gtcgcgggcc gcgcgtcccc caggccggag atctgcgagt    240
```

```
gaagagggac aagggaaaag aaacaaagcc acagacgcaa cttgagactc ccgcatccca      300

aaagaagcac cagatcagca aaaaagaag atgggccccc cgagcctcgt gctgtgcttg      360

ctgtccgcaa ctgtgttctc cctgctgggt ggaagctcgg ccttcctgtc gcaccaccgc      420

ctgaaaggca ggtttcagag ggaccgcagg aacatccgcc ccaacatcat cctggtgctg      480

acggacgacc aggatgtgga gctgggttcc atgcaggtga tgaacaagac ccggcgcatc      540

atggagcagg gcgggacgca cttcatcaac gccttcgtga ccacacccat gtgctgcccc      600

tcacgctcct ccatcctcac cggcaagtac gtccacaacc acaacaccta caccaacaat      660

gagaactgct cctcgccctc ctggcaggca cagcacgaga gccgcacctt tgccgtgtac      720

ctcaatagca ctggctaccg gacagctttc ttcgggaagt atcttaatga atacaacggc      780

tcctacgtgc cacccggctg gaaggagtgg gtcggactcc ttaaaaactc ccgctttta      840

aactacacgc tgtgtcggaa cggggtgaaa gagaagcacg gctccgacta ctccaaggat      900

tacctcacag acctcatcac caatgacagc gtgagcttct ccgcacgtc caagaagatg      960

tacccgcaca ggccagtcct catggtcatc agccatgcag ccccccacgg ccctgaggat     1020

tcagccccac aatattcacg cctcttccca aacgcatctc agcacatcac gccgagctac     1080

aactacgcgc ccaacccgga caaacactgg atcatgcgct acacggggcc catgaagccc     1140

atccacatgg aattcaccaa catgctccag cggaagcgct tgcagaccct catgtcggtg     1200

gacgactcca tggagacgat ttacaacatg ctggttgaga cgggcgagct ggacaacacg     1260

tacatcgtat acaccgccga ccacggttac cacatcggcc agtttggcct ggtgaaaggg     1320

aaatccatgc catatgagtt tgacatcagg gtcccgttct acgtgagggg ccccaacgtg     1380

gaagccggct gtctgaatcc ccacatcgtc ctcaacattg acctggcccc caccatcctg     1440

gacattgcag gcctggacat acctgcggat atggacggga atccatcct caagctgctg     1500

gacacggagc ggccggtgaa tcggtttcac ttgaaaaaga agatgagggt ctggcgggac     1560

tccttcttgg tggagagagg caagctgcta cacaagagag acaatgacaa ggtggacgcc     1620

caggaggaga actttctgcc caagtaccag cgtgtgaagg acctgtgtca gcgtgctgag     1680

taccagacgg cgtgtgagca gctgggacag aagtggcagt gtgtggagga cgccacgggg     1740

aagctgaagc tgcataagtg caagggcccc atgcggctgg cggcagcag agccctctcc     1800

aacctcgtgc ccaagtacta cgggcagggc agcgaggcct gcacctgtga cagcgggga     1860

tacaagctca gcctggccgg acgccggaaa aaactcttca agaagaagta caaggccagc     1920
```

```
tatgtccgca gtcgctccat ccgctcagtg gccatcgagg tggacggcag ggtgtaccac    1980

gtaggcctgg gtgatgccgc ccagccccga aacctcacca agcggcactg gccaggggcc    2040

cctgaggacc aagatgacaa ggatggtggg gacttcagtg gcactggagg ccttcccgac    2100

tactcagccg ccaaccccat taaagtgaca catcggtgct acatcctaga gaacgacaca    2160

gtccagtgtg acctggacct gtacaagtcc ctgcaggcct ggaaagacca caagctgcac    2220

atcgaccacg agattgaaac cctgcagaac aaaattaaga acctgaggga agtccgaggt    2280

cacctgaaga aaaagcggcc agaagaatgt gactgtcaca aaatcagcta ccacacccag    2340

cacaaaggcc gcctcaagca cagaggctcc agtctgcatc cttttcaggaa gggcctgcaa    2400

gagaaggaca aggtgtggct gttgcgggag cagaagcgca agaagaaact ccgcaagctg    2460

ctcaagcgcc tgcagaacaa cgacacgtgc agcatgccag gcctcacgtg cttcacccac    2520

gacaaccagc actggcagac ggcgcctttc tggacactgg ggcctttctg tgcctgcacc    2580

agcgccaaca ataacacgta ctggtgcatg aggaccatca atgagactca caatttcctc    2640

ttctgtgaat ttgcaactgg cttcctagag tactttgatc tcaacacaga cccctaccag    2700

ctgatgaatg cagtgaacac actggacagg gatgtcctca accagctaca cgtacagctc    2760

atggagctga ggagctgcaa gggttacaag cagtgtaacc cccggactcg aaacatggac    2820

ctgggactta agatggagg aagctatgag caatacaggc agtttcagcg tcgaaagtgg    2880

ccagaaatga agagaccttc ttccaaatca ctgggacaac tgtgggaagg ctgggaaggt    2940

taagaaacaa cagaggtgga cctccaaaaa catagaggca tcacctgact gcacaggcaa    3000

tgaaaaacca tgtgggtgat ttccagcaga cctgtgctat tggccaggag gcctgagaaa    3060

gcaagcacgc actctcagtc aacatgacag attctggagg ataaccagca ggagcagaga    3120

taacttcagg aagtccattt ttgcccctgc ttttgctttg gattatacct caccagctgc    3180

acaaaatgca ttttttcgta tcaaaaagtc accactaacc ctcccccaga agctcacaaa    3240

ggaaaacgga gagagcgagc gagagagatt tccttggaaa tttctcccaa gggcgaaagt    3300

cattggaatt tttaaatcat aggggaaaag cagtcctgtt ctaaatcctc ttattctttt    3360

ggtttgtcac aaagaaggaa ctaagaagca ggacagaggc aacgtggaga ggctgaaaac    3420

agtgcagaga cgtttgacaa tgagtcagta gcacaaaaga gatgacattt acctagcact    3480

ataaaccctg gttgcctctg aagaaactgc cttcattgta tatatgtgac tatttacatg    3540

taatcaacat gggaactttt aggggaacct aataagaaat cccaattttc aggagtggtg    3600

gtgtcaataa acgctctgtg gccagtgtaa aagaaaatcc ctcgcagttg tggacatttc    3660
```

                                    63

```
tgttcctgtc cagataccat ttctcctagt atttctttgt tatgtcccag aactgatgtt    3720

ttttttttaa ggtactgaaa agaaatgaag ttgatgtatg tcccaagttt tgatgaaact    3780

gtatttgtaa aaaaaatttt gtagtttaag tattgtcata cagtgttcaa aaccccagcc    3840

aatgaccagc agttggtatg aagaaccttt gacattttgt aaaaggccat ttctttcttg    3900

ggagtttttt ggtgtgtctg tttttttaaa gtattcaaga tactaccagt caacatcttt    3960

ttggaagaaa atgccttggg tttagaagat tttcttaaaa ggggagtaga tggttgtaga    4020

ttgactaaaa agtctaccat acttcaaggg actacaggta agtctcatag tataccagct    4080

ttggtacttc atttttaaa aaagtattaa tcaattgcaa agaaattcgc cttggccaac      4140

ccttctttgt gtatcaggta gtctaacctg atacaagtag ttgacagatt tcaactatca    4200

atcaccagtc caacccattt ctcatttaac agatgacgga gataatccct aaaagcaccc    4260

acatttgttt caatgcccca aacaggccaa ggctccctag caactcccta gtggcgtttt    4320

ttaacttctc agaaactgtt accattattt gaaataggct tccttaacct cctttaccct    4380

taacccaaca gggattt                                                   4397


<210>   7
<211>   1661
<212>   DNA
<213>   Homo sapiens

<400>   7
ggcactggcc aggggcccct gaggaccaag atgacaagga tggtggggac ttcagtggca      60

ctggaggcct tcccgactac tcagccgcca accccattaa agtgacacat cggtgctaca    120

tcctagagaa cgacacagtc cagtgtgacc tggacctgta caagtccctg caggcctgga    180

aagaccacaa gctgcacatc gaccacgaga ttgaaaccct gcagaacaaa attaagaacc    240

tgagggaagt ccgaggtcac ctgaagaaaa agcggccaga agaatgtgac tgtcacaaaa    300

tcagctacca cacccagcac aaaggccgcc tcaagcacag aggctccagt ctgcatcctt    360

tcaggaaggg cctgcaagag aaggacaagg tgtggctgtt gcgggagcag aagcgcaaga    420

agaaactccg caagctgctc aagcgcctgc agaacaacga cacgtgcagc atgccaggcc    480

tcacgtgctt cacccacgac aaccagcact ggcagacggc gcctttctgg acactggggc    540

ctttctgtgc ctgcaccagc gccaacaata acacgtactg gtgcatgagg accatcaatg    600

agactcacaa tttcctcttc tgtgaatttg caactggctt cctagagtac tttgatctca    660

acacagaccc ctaccagctg atgaatgcag tgaacacact ggacaggggat gtcctcaacc    720
```

```
agctacacgt acagctcatg gagctgagga gctgcaaggg ttacaagcag tgtaaccccc    780

ggactcgaaa catggacctg ggacttaaag atggaggaag ctatgagcaa tacaggcagt    840

ttcagcgtcg aaagtggcca gaaatgaaga gaccttcttc caaatcactg ggacaactgt    900

gggaaggctg ggaaggttaa gaaacaacag aggtggacct ccaaaaacat agaggcatca    960

cctgactgca caggcaatga aaaaccatgt gggtgatttc cagcagacct gtgctattgg   1020

ccaggaggcc tgagaaagca agcacgcact ctcagtcaac atgacagatt ctggaggata   1080

accagcagga gcagagataa cttcaggaag tccatttttg ccctgctttt gctttggat   1140

tatacctcac cagctgcaca aaatgcattt tttcgtatca aaaagtcacc actaaccctc   1200

ccccagaagc tcacaaagga aaacggagag agcgagcgag agagatttcc ttggaaattt   1260

ctcccaaggg cgaaagtcat tggaattttt aaatcatagg ggaaaagcag tcctgttcta   1320

aatcctctta ttcttttggt ttgtcacaaa gaaggaacta agaagcagga cagaggcaac   1380

gtggagaggc tgaaaacagt gcagagacgt ttgacaatga gtcagtagca caaaagagat   1440

gacatttacc tagcactata aaccctggtt gcctctgaag aaactgcctt cattgtatat   1500

atgtgactat ttacatgtaa tcaacatggg aacttttagg ggaacctaat aagaaatccc   1560

aattttcagg agtggtggtg tcaataaacg ctctgtggcc agtgtaaaag aaaaaaaaaa   1620

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaa a                         1661


<210>  8
<211>  3906
<212>  DNA
<213>  Homo sapiens

<400>  8
ctcgggcgcg cacaggcagc tcggtttgcc ctgcgattga gctgcgggtc gcggccggcg     60

ccggcctctc caatggcaaa tgtgtgtggc tggaggcgag cgcgaggctt tcggcaaagg    120

cagtcgagtg tttgcagacc ggggcgagtc ctgtgaaagc agataaaaga aaacatttat    180

taacgtgtca ttacgagggg agcgcccggc cggggctgtc gcactccccg cggaacattt    240

ggctccctcc agctccgaga gaggagaaga agaaagcgga aaagaggcag attcacgtcg    300

tttccagcca agtggacctg atcgatggcc ctcctgaatt tatcacgata tttgatttat    360

tagcgatgcc ccctggtttg tgtgttacgc acacacacgt gcacacaagg ctctggctcg    420

cttccctccc tcgtttccag ctcctgggcg aatcccacat ctgtttcaac tctccgccga    480

gggcgagcag gagcgagagt gtgtcgaatc tgcgagtgaa gaggggacgag ggaaaagaaa   540
```

```
caaagccaca gacgcaactt gagactcccg catcccaaaa gaagcaccag atcagcaaaa       600

aaagaagatg ggccccccga gcctcgtgct gtgcttgctg tccgcaactg tgttctccct       660

gctgggtgga agctcggcct tcctgtcgca ccaccgcctg aaaggcaggt ttcagaggga       720

ccgcaggaac atccgcccca acatcatcct ggtgctgacg gacgaccagg atgtggagct       780

gggttccatg caggtgatga acaagacccg gcgcatcatg gagcagggcg gggcgcactt       840

catcaacgcc ttcgtgacca cacccatgtg ctgcccctca cgctcctcca tcctcactgg       900

caagtacgtc cacaaccaca acacctacac caacaatgag aactgctcct cgccctcctg       960

gcaggcacag cacgagagcc gcacctttgc cgtgtacctc aatagcactg gctaccggac      1020

agctttcttc gggaagtatc ttaatgaata caacggctcc tacgtgccac ccggctggaa      1080

ggagtgggtc ggactcctta aaaactcccg cttttataac tacacgctgt gtcggaacgg      1140

ggtgaaagag aagcacggct ccgactactc caaggattac ctcacagacc tcatcaccaa      1200

tgacagcgtg agcttcttcc gcacgtccaa gaagatgtac ccgcacaggc cagtcctcat      1260

ggtcatcagc catgcagccc cccacggccc tgaggattca gccccacaat attcacgcct      1320

cttcccaaac gcatctcagc acatcacgcc gagctacaac tacgcgccca cccggacaa      1380

acactggatc atgcgctaca cggggcccat gaagcccatc cacatggaat tcaccaacat      1440

gctccagcgg aagcgcttgc agaccctcat gtcggtggac gactccatgg agacgattta      1500

caacatgctg gttgagacgg gcgagctgga caacacgtac atcgtataca ccgccgacca      1560

cggttaccac atcggccagt ttggcctggt gaaagggaaa tccatgccat atgagtttga      1620

catcagggtc ccgttctacg tgaggggccc caacgtggaa gccggctgtc tgaatcccca      1680

catcgtcctc aacattgacc tggcccccac catcctggac attgcaggcc tggacatacc      1740

tgcggatatg gacgggaaat ccatcctcaa gctgctggac acggagcggc cggtgaatcg      1800

gtttcacttg aaaaagaaga tgagggtctg gcgggactcc ttcttggtgg agagaggcaa      1860

gctgctacac aagagagaca atgacaaggt ggacgcccag gaggagaact ttctgcccaa      1920

gtaccagcgt gtgaaggacc tgtgtcagcg tgctgagtac cagacggcgt gtgagcagct      1980

gggacagaag tggcagtgtg tggaggacgc cacggggaag ctgaagctgc ataagtgcaa      2040

gggcccccatg cggctgggcg gcagcagagc cctctccaac ctcgtgccca gtactacgg      2100

gcagggcagc gaggcctgca cctgtgacag cggggactac aagctcagcc tggccggacg      2160

ccggaaaaaa ctcttcaaga agaagtacaa ggccagctat gtccgcagtc gctccatccg      2220
```

```
ctcagtggcc atcgaggtgg acggcagggt gtaccacgta ggcctgggtg atgccgccca        2280

gccccgaaac ctcaccaagc ggcactggcc aggggcccct gaggaccaag atgacaagga        2340

tggtggggac ttcagtggca ctggaggcct tcccgactac tcagccgcca accccattaa        2400

agtgacacat cggtgctaca tcctagagaa cgacacagtc cagtgtgacc tggacctgta        2460

caagtccctg caggcctgga aagaccacaa gctgcacatc gaccacgaga ttgaaaccct        2520

gcagaacaaa attaagaacc tgagggaagt ccgaggtcac ctgaagaaaa agcggccaga        2580

agaatgtgac tgtcacaaaa tcagctacca cacccagcac aaaggccgcc tcaagcacag        2640

aggctccagt ctgcatcctt tcaggaaggg cctgcaagag aaggacaagg tgtggctgtt        2700

gcgggagcag aagcgcaaga agaaactccg caagctgctc aagcgcctgc agaacaacga        2760

cacgtgcagc atgccaggcc tcacgtgctt cacccacgac aaccagcact ggcagacggc        2820

gcctttctgg acactggggc ctttctgtgc ctgcaccagc gccaacaata acacgtactg        2880

gtgcatgagg accatcaatg agactcacaa tttcctcttc tgtgaatttg caactggctt        2940

cctagagtac tttgatctca acacagaccc ctaccagctg atgaatgcag tgaacacact        3000

ggacagggat gtcctcaacc agctacacgt acagctcatg gagctgagga gctgcaaggg        3060

ttacaagcag tgtaaccccc ggactcgaaa catggacctg gatggaggaa gctatgagca        3120

atacaggcag tttcagcgtc gaaagtggcc agaaatgaag agaccttctt ccaaatcact        3180

gggacaactg tgggaaggct gggaaggtta agaaacaaca gaggtggacc tccaaaaaca        3240

tagaggcatc acctgactgc acaggcaatg aaaaaccatg tgggtgattt ccagcagacc        3300

tgtgctattg gccaggaggc ctgagaaagc aagcacgcac tctcagtcaa catgacagat        3360

tctggaggat aaccagcagg agcagagata acttcaggaa gtccattttt gccccctgctt        3420

ttgctttgga ttatacctca ccagctgcac aaaatgcatt ttttcgtatc aaaaagtcac        3480

cactaacccct cccccagaag ctcacaaagg aaaacggaga gagcgagcga gagagatttc        3540

cttggaaatt tctcccaagg gcgaaagtca ttggaatttt taaatcatag gggaaaagca        3600

gtcctgttct aaatcctctt attcttttgg tttgtcacaa agaaggaact aagaagcagg        3660

acagaggcaa cgtggagagg ctgaaaacag tgcagagacg tttgacaatg agtcagtagc        3720

acaaaagaga tgacatttac ctagcactat aaaccctggt tgcctctgaa gaaactgcct        3780

tcattgtata tatgtgacta tttacatgta atcaacatgg gaactttttag gggaacctaa        3840

taagaaatcc caattttcag gagtggtggt gtcaataaac gctctgtggc cagtgtaaaa        3900

gaaaaa                                                                    3906
```

```
785                   790                   795                   800
```

```
Asp Val Leu Asn Gln Leu His Val Gln Leu Met Glu Leu Arg Ser Cys
            805             810                 815
```

```
Lys Gly Tyr Lys Gln Cys Asn Pro Arg Thr Arg Asn Met Asp Leu Gly
           820             825                 830
```

```
Leu Lys Asp Gly Gly Ser Tyr Glu Gln Tyr Arg Gln Phe Gln Arg Arg
        835                 840                 845
```

```
Lys Trp Pro Glu Met Lys Arg Pro Ser Ser Lys Ser Leu Gly Gln Leu
    850                 855                 860
```

```
Trp Glu Gly Trp Glu Gly
865                 870
```

51